Chapter 4
Policy Issues and Management Conflicts Challenge Multiple-Use Planning and Management During the 1970's

The National Setting

National demands for timber, energy, water and water quality, beef, wildlife and fish, and opportunities for outdoor recreation and wilderness experience continued to increase dramatically during the 1970's. National awareness of environmental systems — their composition, structure, and functions — and the public interest in the need to sustain them for the needs of future generations likewise increased as the environmental movement continued to advance. These burgeoning demands and the growing public awareness of environmental concerns intensified pressures on all the uses of national forest lands and resources as well as the calls for preservation and management adjustments to keep their environmental systems healthy, diverse, and productive.

In this setting, conflicts over the use and management of national forests opened up national policy issues and debates that burdened and challenged the Forest Service throughout the 1970's. At the field level, national forest managers struggled to respond to the rising demands for use and, as well as they could, to the national policy issues and growing management challenges. This chapter addresses the major policy issues and debates of the 1970's. Chapter 5 reviews the actual performance of national forest land and resource management at the field level.

Huge increases in lumber and plywood prices beginning in the late 1960's and continuing throughout the 1970's raised the concern and efforts of the Administration and Congress to expand timber supplies from national forests. Controlling this inflation became a priority because lumber and plywood prices were adding disproportionately to the national inflation problem. In 1968, President Johnson proposed the construction of an additional 26 million housing units in the next decade — fully a million more units per year, than those built annually between 1950 and 1968. The housing goals not only called for a decent home for every family; the low-income housing target became an important component of the Administration's national poverty program. Such goals, in turn, were seen as a growth opportunity for both the housing and timber industries. Rising lumber and plywood prices increased housing costs and were seen as a threat to achieving these goals.

The controversy over clearcutting on national forests was elevated to a national policy issue. In order to raise and maintain the allowable cut, the timber industry sought legislation to increase funding to manage national forest timber resources more intensively. Wilderness interests and environmentalists opposed national forest timber harvest increases and turned to litigation under NEPA and related legislation to achieve their national forest management and wilderness designation goals.

The Forest Service, in an effort to overcome a growing uncertainty about the management of *de facto* wilderness areas, particularly as it related to timber harvest planning, initiated the Roadless Area Review and Evaluation (RARE) process to speed up the designation of wilderness areas and release nondesignated roadless areas for multiple-use management. A court challenge aborted the RARE process. Wilderness planning was slowed to a snail's pace. Roadless areas could not be entered without NEPA-based environmental analysis. As a result, timber harvesting was increasingly concentrated on already roaded timber lands. This contributed fuel to the issues of clearcutting and the general adequacy of national forest management.

Wilderness, environmental, and conservation interest groups became polarized against commodity producers over the proper use and management of the national forests. The issue was exacerbated by acknowledged shortfalls in the implementation of clearcutting on some national forests. The Forest Service estimated that the 1970 national forest allowable cut, 12.9 bbf, could, with more intensive management, be increased by 7 bbf by 1978. It also firmly believed that the increase could be realized with greater funding and guarantees that those increases would remain available in future years. As NEPA's environmental quality implications became clear, the potential allowable cut was further qualified as the most timber that could be made available without unacceptable environmental impacts.

The year 1970 introduced a decade of new direction and guidelines for managing multiple uses on national forests; it became a decade of adaptation by national forest managers. Court suits over national forest planning and management multiplied. Congressional efforts at substantive legislation to resolve the polarization between commodity and amenity values failed. However, consensus emerged on procedural legislation and guidelines for long-term national planning for the National Forest System, research, and State and private forestry programs — the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) — and for the planning and management of the individual national forests — the National Forest Management Act of 1976 (NFMA).

This chapter reviews the management conflicts over and the emergence of new national policy for the use and management of national forests and how that policy changed procedures and guidelines for planning and managing multiple uses. It also reviews the performance of the Forest Service's hierarchical organization and decentralized management in addressing these issues.

Administration and Congressional Efforts To Expand National Forest Timber Supplies

Housing Goals, Timber Demands, and Price Responses

The enactment of the Housing and Urban Development Act of 1968 increased the concerns of Congress and the Administration about expanding timber supplies from national forests and other sources. It reaffirmed the Housing Act of 1949's goal — "The realization as soon as feasible of the goal of a decent home and a suitable living environment for every American family." Congress determined that the Johnson Administration's goal of 26 million housing units could be substantially achieved. The 1968 housing legislation directed the President to present a 10-year detailed plan and schedule to achieve his goal and to report on its progress annually. If performance failed to meet scheduled targets, the President's report was to explain why housing targets could not be met and what steps needed to be taken to achieve rescheduled targets in subsequent years. This legislation was extraordinary in two ways. It established national housing goals in quantitative terms for a fixed time period — an unprecedented approach in national policy. It also required monitoring public and private performance in meeting scheduled annual targets and revision of plans and targets in the event of a shortfall.

Increasing the Nation's housing inventory by 26 million units was an ambitious initiative; it responded to the need to replace aging housing and meet housing needs of the maturing postwar Baby Boomers. At spring 1968 congressional hearings, officials of the Department of Housing and Urban Development (HUD) testified on the feasibility and economic effects of the Administration's proposed housing goal. They felt that there was no reason that industries supplying major building materials, such as lumber and plywood, could not supply the additional requirements to meet the President's goal.

USDA also participated in the development of the President's housing proposal. After the proposal was sent to Congress, the Secretary of Agriculture's planning, evaluation, and programming staff evaluated the timber supply and demand impacts of the proposed increased housing construction. It determined that the increase would double 1965–67 timber prices and increase lumber and plywood prices by about 6 percent per year (USDA 1968). It reported that increases in softwood timber harvest from Federal lands were the most effective way for the Federal Government to increase timber supplies and dampen lumber and plywood price inflation, and that rapid increases in Federal timber harvests would raise issues with public groups interested in natural beauty and wilderness objectives.

The Secretary of Agriculture transmitted the special study findings and his timber program recommendations for the President's fiscal year 1970 budget to the President's Office of Management and Budget (OMB) in September 1968. The recommendations proposed modest increases in national forest timber sales, reforestation, and timber stand improvement and restoration of the forest road construction program that had been sharply reduced in FY 1969 as an anti-inflation measure; increased funding for recreation, with smaller increases in other nontimber

resource areas; small increases in all Forest Service research program areas; and technical assistance to encourage greater timber harvesting on nonindustrial private lands. The President's FY 1970 budget retained the pattern of proposed increases, but reduced their amount due to other national priorities and tight budget ceilings designed to contain general inflation.

In the meantime, housing construction rose steadily from an annual rate of 1.4 million units in January 1968 to 1.7 million units in the *first quarter* of 1969 (fig. 10). During the same period, the relative price of softwood lumber rose similarly, but more rapidly (fig. 11). By March 1969, it was 50 percent higher than the average, largely stable lumber price level between 1950 and 1968. But U.S. lumber production did not rise — it stayed at the average annual level of the previous 17 years, 29 bbf.

Softwood plywood relative prices were at their historically lowest level in 1967. They had declined steadily since 1950, by 45 percent, while plywood production had risen each year to almost 5 times the 1950 production — largely as a result of plywood substitution for the softwood lumber boards traditionally used for sheathing, subflooring, and roof enclosure in housing construction. The plywood itself was more costly, but it cost less to install. By March 1969, plywood relative prices had risen to 100 percent above 1967 levels, but plywood production had risen only 15 percent.

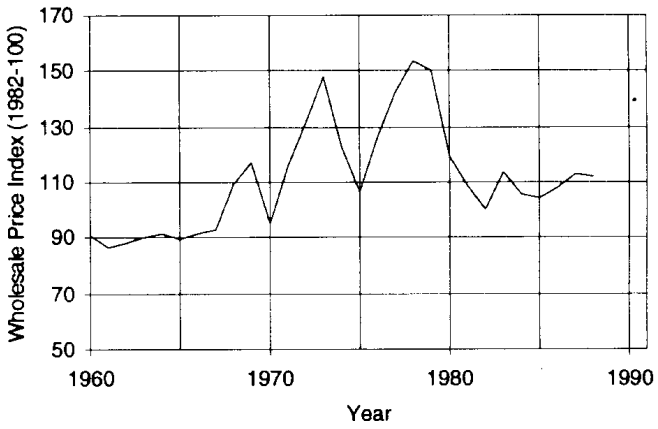


Figure 11. Wholesale price trend for softwood lumber, 1960–1988

Index = average current market price of all softwood wood lumber divided by the producer price index for all communities.
Source: USDA Forest Service 1990.

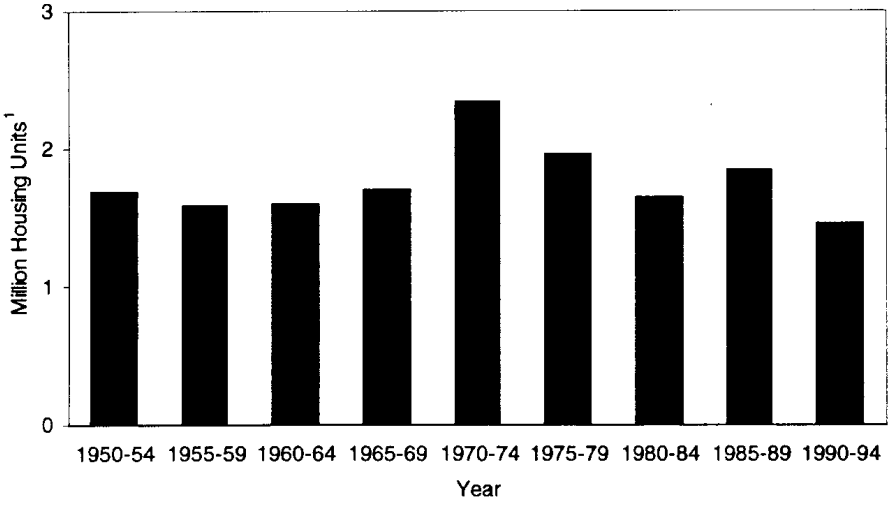


Figure 10. Average new housing units constructed annually per 5-year period, 1950–1994 (includes new housing starts and mobile home shipments)

Source: USDA Forest Service; U.S. Bureau of the Census.

The timber industry quickly interpreted these sharp rises in lumber and plywood prices without corresponding rises in lumber and plywood production as a critical short-term softwood sawtimber shortage. Price increases on national forest timber were much greater, and, in part, reflected some speculative bidding in the timber industry. Timber and housing industry officials quickly informed the Administration and Congress of the timber supply shortage, rising timber prices, increasing lumber and plywood costs, and the increasing cost of

housing construction (American Enterprise Institute 1974; Le Master 1984).

The Administration's Initial Response to Rising Timber Demands and Prices

National elections brought a new Republican Administration in January 1969, with a new set of policy officials. By early March 1969, the new Director of the Budget, responding to USDA's special study and the lumber and plywood price market signals, and to evaluate possible policy and program changes for FY 1971 and subsequent budgets, requested the USDA to prepare a careful analysis of timber supply alternatives and their budgetary and social implications. At the same time, the new Cabinet Committee on Economic Policy appointed the Interagency Task Force on Softwood Lumber and Plywood under the Budget Director to study the price, demand, and supply situation and recommend appropriate short-term actions to ameliorate the price pressures.

The task force analysis for the short term was quickly completed and its recommendations approved by the President — all within 2 weeks. It called for easing short-term transportation bottlenecks in lumber and plywood shipments; increasing FY 1969 Federal timber sales by a billion board feet, mainly from national forests, but also 10 percent from BLM lands; closely supervising defense wood products procurement; and negotiating with Japan to reduce log exports from the West Coast.

In the early spring of 1969, due to mortgage credit shortages and rapidly escalating interest rates (fig. 12), there was a sudden, unexpected decline in housing construction, which caused lumber and plywood prices to fall sharply. The lumber and plywood shortage and price problem promptly dissipated for the rest of 1969 and remained dormant through the 1970 general economic recession and reduced housing construction. The task force, nevertheless, believed that timber supplies and prices would be a continuing problem for national housing goals and directed the Forest Service and the BLM to analyze possible timber sale increases on their lands — giving equal weight to ensuring environmental quality.

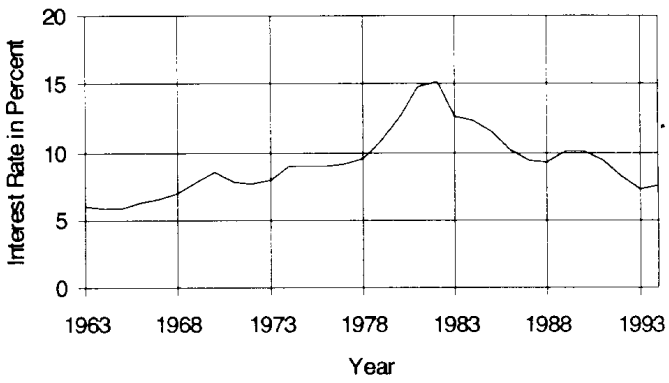


Figure 12. Trend of new home mortgage interest rates, 1963–1994

Source: Economic Report of the President 1995.

The planned FY 1969 public timber sale increases were not realized. Actually, national forest sawtimber sold in FY 1970 dropped 1.2 bbf below the 1968 sales level of 10.8 bbf — a decrease caused by the extremely high appraised prices generated for national forest timber by the rising housing construction and lumber and plywood prices in 1968 and early 1969 and the low timber demand following the sudden drop in housing construction and lumber and plywood prices in the balance of 1969 and 1970. The timber industry appealed the situation to the Secretary of Agriculture, and almost all of the planned but unsold FY 1969 national forest timber sale offerings were reoffered in FY 1970. To reduce any future lags between national forest timber sale price appraisals and a rapid decline in lumber and plywood prices, the Forest Service adjusted its method of updating appraisal prices to reflect the current timber market. With these adjustments, timber sold on national forests rose to 12.3 bbf in 1970. The planned sale volume for FY 1970 was 12.7 bbf (USDA 1972).

Congressional Response and the Timber Supply Act of 1969

In the spring of 1969, both houses of the 91st Congress held hearings on lumber price increases, rising housing costs, and the problems of lumber production. They focused on the adequacy of the President's proposed actions, the need for additional

forest roads, and the long-term alternatives for expanding timber supplies. The more than 40 witnesses included representatives from HUD, the housing industry, and a cross-section of timber product manufacturers as well as "government and private witnesses," all of whom Senator John Sparkman of Alabama, chairman of the Senate hearing, said "hold the solution to the problem." The latter included representatives of the Forest Service, the BLM, and nonindustrial forest owners and wilderness, recreation, and wildlife advocates.

There was little disagreement about the issue. It was succinctly defined by the question raised by the President of the National Homebuilders Association: *How is the housing industry going to get the lumber and plywood to construct an average of 2.6 million units per year to 1978, the goal of the 1968 Housing Act, when the industry can not get enough timber and wood products to produce 1.5 million units in 1969?* The Senate hearing concluded that national forest timber harvests, with 50 percent of the Nation's softwood sawtimber inventory, were much below their potential. The Senate's report on the hearings emphasized that national forest timber production could be substantially increased and assure future supplies if "the necessary investment was made in intensive forest management on a continuing basis" (U.S. Senate 1969).

Shortly after the hearings, the timber industry, to substantially increase annual national forest timber production, drafted a legislative proposal to establish a fund from national forest timber receipts to finance silvicultural practices. The proposal reflected the findings of the Forest Service's Douglas-fir supply study on alternatives for increasing timber supplies on national forest lands in the Douglas-fir region of western Washington and Oregon and northern California (USDA Forest Service 1969b). The findings showed that the allowable cut could be substantially increased if guaranteed sustained annual investments could be made for reforestation, timber stand improvement, thinnings, and other practices to increase the intensity of timber management, and for adequate road access to accomplish them. Chief Edward Cliff enunciated this finding. The principal emphasis of the industry's proposal was on increased sustained annual investment (Le Master 1984).

Annual appropriations for forest management were typically viewed as postponable because the return on timber investments was seen as occurring only in the long term. Congress readily justified such postponements using inflation control and other short-term financial budget pressures as a rationale. Nevertheless, the timber industry proposal was favorably received by several members of Congress. It was introduced under the common title of the National Timber Supply Act of 1969 in both the Senate and House in April 1969 and the House Subcommittee on Forests scheduled hearings on the House version (H.R. 10344) for May 1969. There was widespread, bipartisan support for this bill, which was cosponsored by 56 Congressmen.

The hearings on H.R. 10344 drew testimony from 63 witnesses, including representatives of 10 environmental, conservation, and wilderness interest groups. All 10 opposed or called for substantial modification of the bill's strong timber orientation. The timber industry supported the bill vigorously. The Administration generally opposed establishing a permanent trust fund because such funds reduced future budget flexibility. As the hearings drew to a close, however, the USDA proposed minor funding revisions and amendments to ensure funding increases for managing the nontimber multiple uses and resources that would be affected when timber sale levels were increased.

Conservation groups saw H.R. 10344 as a threat to future wilderness designation and the development of recreational and other nontimber national forest resources and a hazard to the best allocation of available funds among national forest uses and services. The executive director of the National Wildlife Federation submitted testimony that made it clear that the Federation would use all its energy and resources to "go to the people" if the timber industry persisted in its efforts to increase Federal timber harvests where it would be "unwise" from the point of view of all land values (Le Master 1984).

The Sierra Club said it supported more intensive management on certain national forest lands, but only under the following conditions: sound, ecological forest principles would be followed rather than the maximum production of timber in the shortest

time; strict provisions would be made to ensure protection of all multiple-use values, even where timber was the main objective; intensive management would occur only on lands that everybody plainly agreed should be managed for timber; and areas having outstanding scenic and wilderness values, long identified and stated by conservation groups locally and across the country, would be excluded from H.R. 10344 policy direction.

The environmental, conservation, and wilderness interests thus saw the Timber Supply Act as giving timber dominance over other resources that were to be given equal consideration under the MUSY Act of 1960. Both the Sierra Club and the Wilderness Society saw H.R. 10344 as foreclosing designation of *de facto* wilderness areas, largely roadless areas that a national forest had defined as capable of growing commercial timber products and providing other multiple uses (Le Master 1984).

Responding to the hearings, the House Forests Subcommittee extensively revised H.R. 10344 to address the objections of conservation, environmental, and wilderness interests while maintaining its key feature: a "high timber yield fund" based on "all the unallocated receipts from the sale of timber and other forest products, to sustain intensive timber management practices on national forests." The revised bill was replaced by a "clean" bill, H.R. 12025. After the Subcommittee and full Committee adopted additional amendments, including a broader title — the National Forest Conservation and Management Act — it was favorably reported by the Subcommittee in September 1969 by a vote of 23 to 1 (Le Master 1984).

Although much of the bill's interest and urgency was lost with the collapse of lumber and plywood prices in the spring of 1969, the timber industry saw it as a victory (AEI 1974). In December 1969, however, the Sierra Club, the Audubon Society, the Izaak Walton League, the National Rifle Association, the Wildlife Management Institute, Trout Unlimited, Friends of the Earth, and the Committee on Natural Resources sent out telegrams and letters warning that H.R. 12025 "threatens America's national forests, scuttles historic multiple-use practices, and undermines prospective parks, wilderness, open space, and recreation areas." They also initiated a grassroots campaign to encourage their members to send letters and telegrams to Congress (Le Master 1984).

Final debate and House action on H.R. 12025 were scheduled for late February 1970. The resolution to debate the measure was defeated by a vote of 225 to 150 with 52 abstentions. Opposition from conservation, environmental, and wilderness interests contributed importantly to this defeat. The bill died without a discussion of its merits on the House floor. Other contributing factors were the return of lumber and plywood prices to 1967 levels, restoration of adequate timber supplies in early 1970, and a first cresting of popularity of the new environmental movement. The expressed opposition of Wayne Aspinall of Colorado, Chairman of the House Committee on Interior and Insular Affairs and Chairman of the Public Land Law Review Commission (PLLRC) authorized by the House Committee in 1964, was also a critical factor. He agreed with the motives for the introduction and support of H.R. 12025, but considered any action on the legislation at that time to be untimely. He favored a more balanced solution of the timber supply problem based on the PLLRC report, which was to be released shortly and was not yet available to Congress. Aspinall's approach favored classification of national forest lands by dominant uses, including commercial timber production, as opposed to the multiple-use approach. But this idea never made any policy headway. The PLLRC report was largely ignored. Its recommendations were commodity oriented and out of step with environmental concerns and NEPA policy direction (Le Master 1984).

Emergence of the Forest and Rangeland Renewable Resources Planning Act in 1974

In 1971 and 1972, housing construction rose to new peaks, 2.6 million and 3.0 million units, respectively, then dipped back to 2.6 million units in 1973. Lumber relative prices rose by 50 percent; plywood prices by 40 percent. They contributed disproportionately — several times their weight in the wholesale price index — to the general inflation that the President's Economic Stabilization Program was trying to control. The program's credibility was being affected by the magnitude of lumber and plywood price increases (Fig. 13) and by reported irregularities and

distortions in the industry's response to price-control efforts. At the same time, the Government was seen as a major contributor to both the demand problem (through the housing goals) and the supply problem (through inflexible national forest timber supplies).

In March 1973, more than 2,000 members of the National Association of Homebuilders and the National Lumber and Building Materials Association staged a mass meeting in Washington, D.C. They were strongly supported by the National Forest Products Association. They "marched" on congressional and Federal agency offices to dramatize the seriousness of the lumber and plywood supply problem for homebuilders, who were increasingly unable to get framing materials — a problem that the President of the Homebuilders Association said was intensified by the failure of the national forests to make the full allowable cut available.

Between 1971 and 1973, a period of rising lumber and plywood demands and prices, there were repeated efforts to pass legislation to increase present timber supplies by intensifying the management of national forest timber. In 1971, Congressman Charles Griffin of Mississippi introduced a bill, H.R. 156, essentially identical to the Timber Supply Act of 1969, but it failed to get a hearing. At about the same time, Oregon's Senator Mark Hatfield introduced the American Forestry Act, S. 350. It would have authorized a forestry incentives program to encourage forest development on nonindustrial private and State-owned lands; a forest land management fund for Federal lands based on timber sale receipts, similar to that in the Timber Supply Act of 1969; and an American Forestry Policy Board to counsel the Secretaries of Agriculture and the Interior on forest land policy. Senator Lee Metcalf of Montana introduced the Forest Lands Restoration and Protection Act, S. 1734, as an environmental analog to Senator Hatfield's bill, and Congressman John Dingell of Michigan introduced the same act as H.R. 7383 in the House. The latter bills focused on establishing rigorous regulatory requirements for both private and public forest lands, including the licensing of foresters and requiring that licensed foresters prepare mandatory harvest plans for private lands. "Sound forestry practices" were spelled out in detail for Federal lands, including the use of long rotations and the "even-flow principle" defined as "perpetual yield of approximately equal annual amounts ... in quantities which do not decline and which may increase."

In 1973, during the 93rd Congress, Senator Sparkman introduced the Wood Supply and National Lands

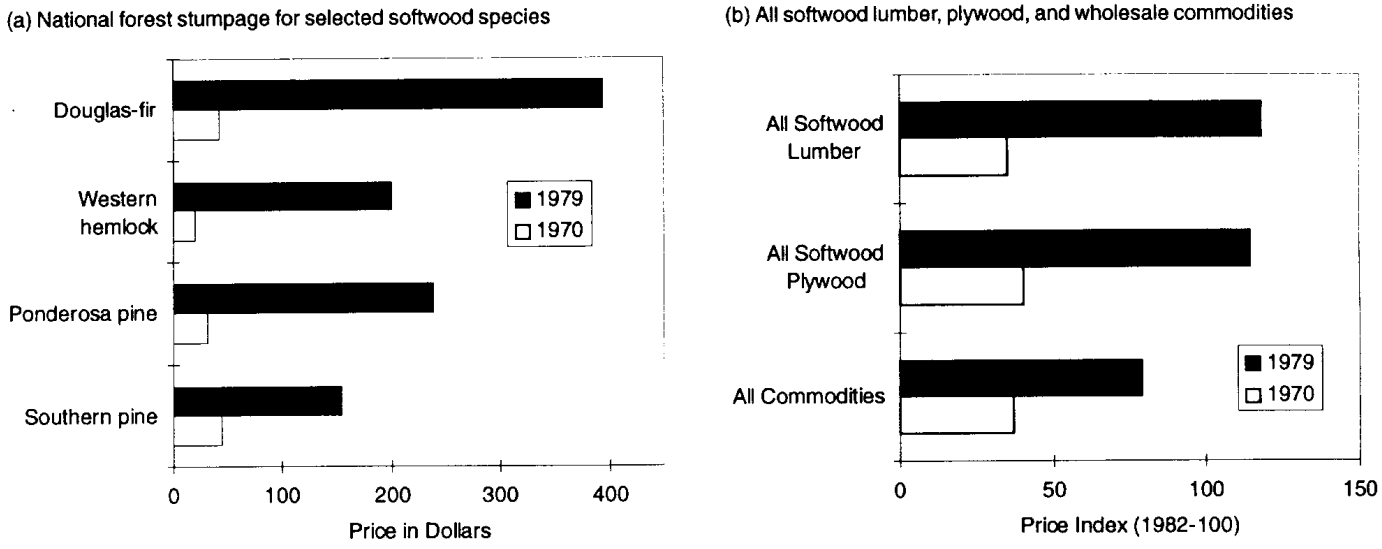


Figure 13. Price increases for softwood lumber, 1970–1979
Source: Ulrich 1990.

Investment Act, S. 1775, an updated version of the Timber Supply Act. Senator Hatfield introduced a revised version of the American Forestry Act as S. 1996. Both were referred to the Senate Committee on Agriculture and Forestry, which was deeply involved with a bill for a forestry incentives program for private nonindustrial lands and another bill banning log exports from Federal and non-Federal lands in the Pacific Northwest. The forestry incentives bill had wide support among most interest groups, and this consensus contributed largely to its eventual enactment. It authorized annual appropriations of $25 million to share forestry practice costs on nonindustrial private woodlands of 500 acres or less.

The export of softwood logs from the West Coast to Japan became a public issue in the late 1960's, when softwood log exports threatened to rise above 2 bbf per year. Although almost all the export volume came from non-Federal lands, the Secretaries of Agriculture and the Interior in April 1968 issued joint orders restricting the volume of unprocessed timber that could be harvested and exported from national forests and BLM timberlands to 350 million board feet. No restriction was placed on the amount of "processed" timber that could be exported. The Secretaries' export quota was legislated and became effective January 1, 1969, and expired on December 31, 1973 (Hines 1987).

The proposal to ban log exports was seen as addressing symptoms rather than causes and was not considered a cure for the timber supply issue it addressed. It paved the way for other nations to retaliate. Even so, when the log export quota on Federal land expired in 1973, a provision attached to the Department of the Interior and Related Agencies Appropriations Act in 1974 and each year thereafter continued to prohibit the export of "unprocessed" timber harvested from Federal lands (Hines 1987).

The timber industry strongly supported both timber supply bills (S. 1775 and S. 1996). USDA supported neither. Reflecting the traditional position of OMB on the uncontrollable aspects of permanent trust funds, USDA insisted that it did not need a special fund based on national forest receipts to increase Federal forest management funding. The Sierra Club, Friends of the Earth, the Audubon Society, the National Wildlife Federation, the Wilderness Society, and the American Forestry Association likewise opposed both bills for their own reasons.

Instead of pursuing the highly polarized — conservation vs. timber industry — timber supply bills, the Committee on Agriculture and Forestry turned to a new proposal — S. 2296, the National Forest Environmental Management Act, which eventually became the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA). The bill was written as a procedural measure rather than policy direction. Senator Hubert Humphrey of Minnesota introduced it as an amendment to the 1973 Farm Bill. His purpose was to provide a participative, long-term planning approach to national forest management that would reduce the extreme differences between the timber industry and the environmental, conservation, and wilderness interests and the distrust of the Forest Service that had emerged in both groups in the preceding decade. He also wanted the process to circumvent the conventional short-run fiscal expediency in OMB's approach to Forest Service appropriations. Thus, S. 2296 did not specify any substantive policy or program goals for managing national forests; instead, it provided a process to develop management goals and a means to fulfill them using a modified budget process. Based on the President's commitment to support these management goals, this process could potentially ensure sustained and sufficient funding (Le Master 1984).

The Committee found S. 2296 too complicated and comprehensive to be added as an amendment to the already complex 1973 Farm Bill and proposed introducing a separate bill to explore the interest and support it would attract. Senator Humphrey agreed, but advised the Committee staff that the bill would need to have clear evidence of broad support. Responding to this guidance, the Committee staff, under the leadership of James Giltmier, invited concerned interest groups, including the timber industry, trade associations, conservation and environmental organizations, and the Forest Service, to define areas of agreement on the management of national forest lands. The groups included the American Forestry Association, the American Plywood Association, the Citizens Committee on Natural Resources, the Indus-

trial Forestry Association, the National Forest Products Association, the National Wildlife Federation, the Sierra Club, the Society of American Foresters, Trout Unlimited, the Western Timber Association, and the Wildlife Management Institute. Participation was voluntary, informal, and free of any procedural requirement, and soon was down to reviewing and discussing S. 2296 line by line. In the process, the Forest Service disposition toward the bill shifted from "cooperative skepticism" to "enthusiastic support." Groups often characterized as preservationists, who were not originally included on this committee, later became major contributors (Le Master 1984).

Encouraged by the wide participation in the S. 2296 revision, Senator Humphrey introduced it in November 1973. The forestry community of interest widely endorsed and supported it. The title of the bill became the Forest and Rangeland Renewable Resources Planning Act (RPA). It was literally the first legislative act to come before President Ford at a time when there was extreme tension between Congress and the Administration (Hirt 1994; Le Master 1984). OMB had sent a letter recommending that he veto it. The Secretary of Agriculture urged that he sign it, and he did so on August 17, 1974.

To assist in long-range planning, the RPA required the Secretary of Agriculture to conduct a comprehensive inventory and prepare an assessment of the Nation's forest and rangeland renewable resources every 10 years. The assessment was to summarize the inventory and analyze current and future demands and supplies for renewable resources from all forest and rangeland ownerships and describe Forest Service programs and responsibilities and discuss important policy considerations, laws, and regulations influencing forest and rangeland management. In addition, the RPA required the Secretary to prepare and transmit to Congress, by way of the President, a recommended renewable resource program every 5 years that provided for the protection, management, and development of the National Forest System, cooperative forestry assistance, and forestry research.

The program included specific needs and opportunities for investments, outputs and benefits, and management goals over a 50-year planning period. Congress, for its purposes, apparently considered 5 years the useful life of the RPA program, as they requested that it be updated every 5 years. Congress also required the President to submit a detailed statement of policy, intended to be used in framing Forest Service budget requests — a document that Congress could revise or modify. Congress has chosen to change this statement of policy only once, in 1980.

Sections 5 and 6 of the RPA specified three requirements for national forest lands and resources: A continuing, comprehensive inventory; the integration of national forest management plans with the national RPA program and coordination with corresponding State and local plans and those of other Federal agencies; and the use of a systematic interdisciplinary approach to integrate physical, biological, economic, and other considerations into national forest planning. In this way, the RPA linked, for the first time, national program planning directly to national forest land and resource management.

The RPA legislation did not explicitly provide for public participation, but Senator Humphrey called for a goals-oriented, open, participative planning approach to RPA. On September 19, 1974, he met with the interested citizens who had helped develop the Act and encouraged them and their organizations to participate in and support its implementation. To those present, he pointed out:

> The Act gives you the means to set goals for the long-term and the short-term. This gives us the mechanism for sound planning.... The budget process is going to give us the muscle to reach our aspirations.... The President is entirely free to exercise his discretion, and I expect him to do just that. Likewise, Congress can do the same.... We are bringing program formulation to the people, and it will be up to them to embrace it.... We called this meeting to let you know you count; in order to make sure your ideas count; and to open the door for continued cooperation (Humphrey 1974).

The RPA was received with euphoria in forestry circles and viewed by some as a panacea for the forest resource issues that had been repeatedly analyzed and hotly debated for more than 5 years. The long-term planning it provided could have been, and

had been, carried out under previously existing authorities, with one difference: the RPA provided for congressional endorsement of and interest in the policy analysis, program planning, and budget proposals the Forest Service developed under the RPA.

The RPA, in effect, was the solution the Forest Service sought to the ineffectiveness of its national program planning which was submitted directly to Congress in 1959, and its updated version, which was sent to Congress with a Presidential transmittal in 1962. Richard E. McArdle, Chief of the Forest Service from 1952 to 1962, who led the preparation of those early long-range program plans, strongly endorsed the RPA legislation in a Senate hearing in February 1974 (American Enterprise Institute 1974).

Administration Efforts To Increase Timber Supplies: 1970–1979

While Congress struggled with various legislative proposals to help national forest management respond to the Nation's needs, the timber and housing industry interests, and the environmental and conservation concerns, the Administration continued its own efforts to increase national forest timber supplies. In late 1969, the White House Interagency Task Force on Softwood Timber and Plywood completed its analyses of long-term alternatives for increasing timber supplies. But the White House, responding to the enactment of NEPA in January 1970, directed the Task Force to delay its report and work with the newly created Council on Environmental Quality (CEQ) in the Executive Office of the President to give appropriate emphasis to environmental matters and work for legislation to increase timber supplies in ways that protected the environment. As a result of the polarization during the debate on the Timber Supply Act of 1969, the Task Force and Council judged that it would be next to impossible to obtain legislation. They felt the existing law was sufficient if it could be adequately funded and if the Forest Service and other Federal resource agencies could address the environment.

President Nixon endorsed and released the Task Force's final report in June 1970. The report found that the housing goals would require substantial increases in softwood timber supplies, without which wood product prices would rise substantially above 1962 to 1967 levels. The Forest Service felt that national forest allowable cut increases beyond an additional 7 bbf above the 1970 level would seriously threaten multiple-use and environmental objectives.

President Nixon directed the Secretaries of Agriculture and the Interior to work with CEQ to prepare plans for increasing the timber supply while meeting sustained-yield, multiple-use, and environmental quality objectives. He directed OMB to review any additional funding for such increases for consistency with overall national budget priorities. He further recommended that annual Federal timber sales be flexible and responsive to swings in demand; that USDA press ahead with programs to increase timber supplies from State and private lands; and that the Departments of Housing and Urban Development, Commerce, and Agriculture accelerate efficiency gains in wood product utilization. President Nixon also directed the naming of an advisory panel of outstanding citizens to study the entire range of problems to ensure that inadequate timber supplies did not preempt achieving national housing goals (Nixon 1970).

Responding to the President's direction, as a first step toward achieving the 7-bbf potential increase the Forest Service and the Task Force had reported attainable on national forests, the Forest Service prepared, and USDA proposed to OMB, a supplemental appropriation for FY 1971 to initiate a national forest investment program to increase softwood sawtimber harvests. This proposal was not approved. The 1970 timber demands had fallen to previously normal levels as a result of interest-rate increases and a decline in housing construction. OMB's review, obviously, reflected a very short-term view. In FY 1972, competing national priorities for the available Federal budget and constraints on budget outlay ceilings to reduce general inflation precluded any proposals for an accelerated national forest investment program. Although timber sales were programmed at the 1971 level, Congress approved additional funding to supervise the industry's accelerated harvest of previously bought, but uncut, national forest timber.

In 1971, the Cabinet Committee on Economic Policy reconvened the Task Force on Softwood Lumber and Plywood as housing construction and lumber and plywood prices rose to record levels in 1971 and 1972. President Nixon finally appointed his Advisory Panel on Timber and the Environment. This time the Administration viewed rising lumber and plywood prices as policy problems that affected the credibility of the President's Economic Stabilization Program.

Because raw materials such as timber were not subject to price controls and could be reflected in end-product prices as production costs, lumber and plywood prices were particularly difficult to regulate. For example, softwood prices for standing timber (stumpage) rose about 50 percent on national forests and 50 percent on private lands in the South while lumber and plywood prices rose only 12 and 16 percent, respectively. During the same period, the wholesale prices for all commodities increased by only 4 percent. Wood product prices continued their strong increases in 1973 and reached their highest levels in 1978 and 1979, years when timber stumpage prices and speculation were also at their highest, new household formations were nearly 2 million per year, and construction of new housing units exceeded 2 million per year.

Despite its earlier analyses of housing goals and the timber supply issue, the President's recommendations, and the Administration and Forest Service responses, the reconvened Task Force found that none of the President's recommendations had been implemented except his appointment of an Advisory Panel on Timber and the Environment. Thus, the Task Force quickly concluded that further analyses would add little to the assessment of the timber supply issue or to its proposed solution. It recognized that funding was the key to short- and long-term timber supply increases from Federal lands and urged the Director of the Cost-of-Living Council, which was administering the President's Economic Stabilization Program, to make every effort to find a solution to the inflating lumber and plywood prices and the timber supply issue.

For the FY 1973 programs, budget constraints to contain inflation again squelched any chance that the Forest Service could intensify its management and increase its timber sales. National forest timber sales and harvests remained at FY 1972 levels during FY 1973, but the Secretary of Agriculture and the Director of the Cost-of-Living Council announced plans to increase timber sales by a billion board feet by FY 1974. After a delay, Congress finally approved this proposal and the Administration requested a $15 million supplemental appropriation to fund it. The Natural Resources Defense Council, the Sierra Club, and the Wilderness Society responded with a suit to enjoin the Forest Service from increasing FY 1974 timber sales, and in February 1974 a Federal Court ruled that the congressionally approved billion-board-feet sales increase was illegal without an EIS.

The President's FY 1975 budget included the proposed billion-board-feet increase that Congress had funded. In April 1974, the same environmental and wilderness groups, plus the National Parks and Conservation Association, filed suit against the increase. They asked for a declaratory judgment that the entire FY 1975 Forest Service RPA national forest program beginning on July 1, 1974, violated NEPA by failing to file an EIS. The National Forest Products Association, sensing the suit would shut down or delay timber harvests, became an intervener in the suit. The Association denied that the proposed FY 1975 budget was a legislative proposal or other Federal action that would significantly affect the environment under NEPA. The suit was settled when all parties agreed that the 1975 RPA assessment and program would serve the purposes of an EIS.

Report of the President's Advisory Panel

President Nixon endorsed the Advisory Panel's report in September 1973. The report supported increased timber harvests from national forests, but only with assured sustained financing for the intensified management needed to achieve higher timber harvest levels. It recommended a generous withdrawal of roadless areas qualified for wilderness preservation as well as withdrawing lands with fragile soils and steep, erodible slopes from the timber harvest land base. It supported expanding recreation areas and protecting water supplies, wildlife, and rare and endangered species. The Panel asked that commercial forest lands (CFL) not set aside for wilderness or other uses be designated for timber

production and recommended a National Forest Policy Board to advise the President, the Congress, and the Nation.

The American press widely interpreted the Panel's report and the President's endorsement as recommendations to increase national forest timber harvests. The timber industry praised the report; environmentalists severely criticized it. The New York Times, like the Sierra Club and other environmental groups, viewed the allowable cut on national forests as already too high and, therefore, saw the President's endorsement of a harvest increase as "reckless" policy. The environmental interests took sharp exception to the Panel's support of clearcutting and designating CFL not withdrawn for wilderness or other uses for timber production. The American Forestry Association and the Forest Service likewise opposed designation of nonwithdrawn lands for timber production and the proposal for a National Forestry Policy Board as well. The Ford Administration, reporting the Panel's recommendations and follow-up actions to Congress in 1974, also opposed the Policy Board. Because the RPA process involved the public, the Executive Branch, and the Congress and provided a framework for a systematic, orderly analysis of an array of complex issues, the Ford Administration viewed it as a sufficient opportunity for review and development of forest policy.

Some of the press viewed the Advisory Panel's qualification that national forest harvests be accelerated only if more Federal funds and staff were provided as a stumbling block to both the Administration and the Congress (Washington Star-News 1973; Science 1973). The American Forestry Association (AFA) was more sanguine:

> The biggest needs of the national forests ... are adequate funding and a long-range plan ... and while recommendation nineteen proposes an increased annual Federal expenditure for forest development ... of $200 million, AFA believes ... it should be reaffirmed in each of the other 19 recommendations in words that the White House, the Office of Management and Budget, and the Congress could clearly understand.... (American Forests 1973)

William E. Towell, Executive Vice-President for the AFA, wrote elsewhere:

> The name of the game is funding. It does little good to get new forestry programs authorized unless the money is provided.... Somewhere in the wave of new environmental enthusiasm traditional forestry and wildlife conservation programs have not kept pace in the struggle for tax dollars. New [environmental] projects ... have drained off available funds. These efforts are all good and deserve our attention, but we cannot continue to slight fundamental forestry and wildlife activities.... If money is the name of the game, then let's get our signals straight for the opening kickoff (Towell 1973).

An Independent Effort for Consensus

In the foregoing setting, Marion Clawson, a member of the President's Panel and author of its report, continued his pursuit of a successful resolution to the timber supply and funding issue. In May 1974, he organized the Resources for the Future Forum on "Forest Policy for the Future: Conflict, Compromise, Consensus" (Resources for the Future 1974). Forum organizers were convinced that a substantial consensus on forest policy was both desirable and possible and would be advanced by an exchange of views among concerned persons and interest groups through an open, mutually shared search for a constructive forest policy. Resources for the Future invited more than 200 participants from Congress, the Executive Branch, the timber and building industries, labor unions, universities, and environmental, conservation, and wilderness organizations.

The Forum did not define policy issues in advance. Instead, it addressed the future demand for forest products and services and conflicts and strategies in forest land management in the first two sessions. A third session addressed the administration and financing of forestry programs. The final session was "A Search for Consensus."

The former president of Resources for the Future and U.S. Congressman from Virginia, Joseph L. Fisher, defined consensus as "not a perfect agreement on figures or statements, but rather a shared understanding of what the issues are, pros and cons of the solutions proposed, and the directions in which to go" (Fisher 1974). He identified the question of how much forest land for wilderness versus how much land for timber production as the principal issue on which consensus was lacking. In dealing with this

issue, he thought the country was on the right track, but moving ahead with much backing and filling and grinding of gears. He attributed this difficulty to a lack of confidence and trust among antagonists; it would not be dispelled easily.

The closing session centered on areas of present and potential agreement and those where agreements did not seem possible. William Towell proposed that the interest groups concentrate their efforts on areas of present agreement and avoid areas of major differences. He recommended expansion of program funding for national forest programs as the highest priority issue on the basis of widespread agreement among forest conservation groups that these programs were underfinanced and out of balance with each other and total funding needs. A representative of wilderness interests suggested that the area of concentration be on issues where differences were the greatest. Wilderness did not require major budget expansions; thus, in his view, funding was not an area for a common effort. The Sierra Club could not go along with the AFA's long-range planning and funding goals until the wilderness issues were resolved. The wilderness representative said, "you cannot get agreement with environmentalists for more funding if it represents a threat to wilderness and old-growth forests" (Fisher 1974).

The consensus discussion ended without agreement following a strong statement from William P. Hagenstein, Executive Vice President for the Industrial Forestry Association and former president of the Society of American Foresters. He felt the Nation already had plenty of good forest policies, and he cited many. He concluded that the principal need was to give the Forest Service the tools it needed to get the job done. This appeared to be an endorsement for greater Forest Service funding for all resource purposes including designating new wilderness areas, intensifying forest management, and expanding the Federal timber harvest.

The RPA's enactment a few months later effectively shifted the approach to resolving the national forest management and funding issues. The Forest Service would conduct the RPA assessment and program planning process and prepare a national forest program and the accompanying EIS with public participation. The USDA would review it and approve it. It would then be reviewed by OMB and the President, who would transmit it to Congress along with his statement of policy for its implementation. All Forum participants would have the opportunity to participate in the RPA process.

The Performance of Timber Supplies and Housing Goals in the 1970's

During the 1970's, national forest timber sales averaged 11.0 bbf per year — a reduction of 300 million board feet from the average annual sales volume of the 1960's — and did not vary much from year to year (fig. 14) Thus, when housing construction was at record levels, averaging 2.15 million units, and total timber product consumption rose 30 percent, national forest timber sales did not contribute to any increase in timber supplies.

The average annual timber industry harvest of national forest timber in the 1970's was 11.4 bbf per year — 400 million board feet more than the average annual sales volume. The industry achieved this high average annual harvest level by accelerating harvests of national forest timber it had bought and had not yet cut in the first half if the 1970's. In the latter half of the decade, however, the timber industry reduced its harvest to an average of 10.6 bbf per year — 400 million board feet less than the average annual timber sales volume for the decade — even though housing construction in the 1977 to 1979 period was near peak levels.

Although much of the pressure to expand national forest timber supplies had come from the western forest timber products industries, the West did not share equally with southern or Canadian producers in the expanded softwood lumber and plywood markets. As the U.S. timber and construction industries geared up to meet the national housing goals of the 1970's, total annual softwood lumber and plywood consumption in the United States increased by 18.3 bbf, or 34 percent, from 38.6 bbf in 1969 to 51.9 bbf in 1978. Softwood lumber net imports, primarily from Canada, supplied 42 percent of the increase, or 5.6 bbf. Southern softwood lumber and plywood production provided 5.7 bbf of the increase, or 43 percent. The balance of the increase in consumption, just 2 bbf, or 15 percent came from the western

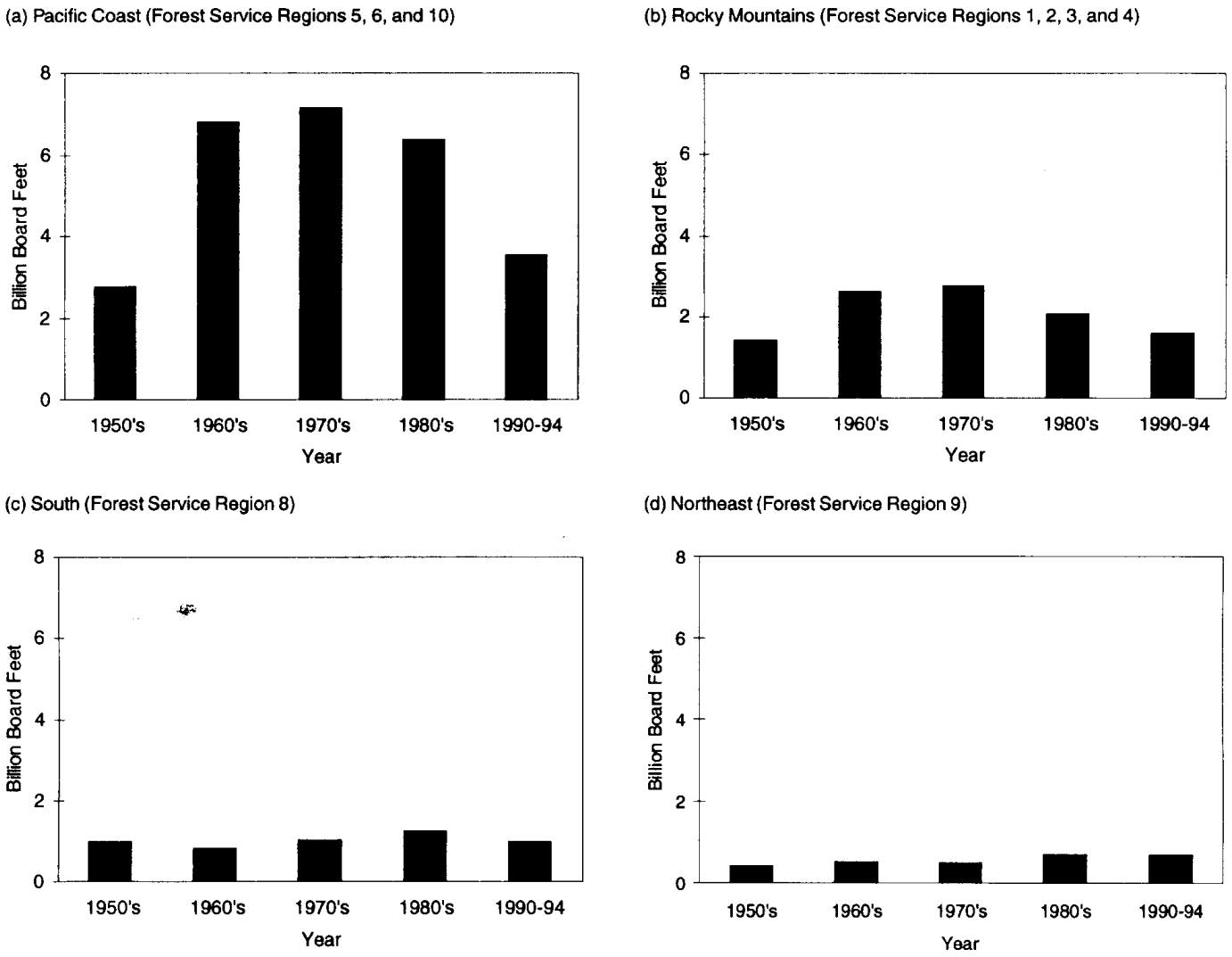


Figure 14. Average annual national forest harvest by decade for major U.S. regions, 1950–1994[1]

[1]First half of the 1990 decade only.
Source: USDA Forest Service.

regions. In the Western States, both industry and other private landowner softwood timber inventories were generally declining, which limited their capacity to expand their timber supplies. Log exports, mainly to Japan, increased from 2.7 bbf in 1970 to 3.8 bbf in 1979, which also limited the expansion of domestic supplies from western mills. Thus, in the 1970's, western national forests became a potential source of increased timber supplies that could, with a higher intensity of timber management, be made available to the western timber industry. However, national forest timber sales for the 1970's actually remained slightly below those for the 1960's.

More than 21 million new housing units, including mobile homes, were added to the national housing inventory between 1969 and 1978 — a substantial fulfillment (more than 82 percent) of the 26 million unit goal of the 1968 Housing Act. A record number of families obtained new housing during this period.

Housing contractors built more homes than ever. Residential construction jobs expanded and workers were fully employed. Realtors sold more new homes than in any previous decade. Financial institutions made a record number of new housing loans. Forest industries had no complaint about profits. Lumber dealers sold record amounts of lumber and plywood. National forest timber harvests were slightly reduced from the 1960's, the number and area of designated wildernesses were expanded, and *de facto* wilderness and roadless areas were being protected by NEPA requirement for an EIS. National recreation areas, national trails, and wild and scenic rivers were expanded in number and area.

The Clearcutting Issue Leads to New Guidelines for Managing Multiple Uses

Clearcutting had become a controversial public issue on a number of national forests during the late 1960's and reached national proportions in 1970. Congressional hearings in 1971 produced new administrative guidelines for clearcutting on national forests, and these were first applied in 1972. However, a court suit in 1973 to enjoin clearcutting on West Virginia's Monongahela National Forest led to a ruling that clearcutting practices were inconsistent with a literal interpretation of the 1897 Organic Act's timber harvesting guidance. The result was an injunction in the Fourth Circuit Court against such cutting, which applied to all national forests in Maryland, West Virginia, Virginia, North Carolina, and South Carolina. If this injunction had been extended to all national forests, it would have reduced timber availability from western national forests by 50 percent. A search for legislative solutions to the clearcutting issue eventually resulted in the passage of the National Forest Management Act of 1976 (NFMA). The process of resolving the clearcutting issue is reviewed here.

Early National Forest System Response to Clearcutting Critiques: 1970

Opposition to clearcutting on national forests emerged in the late 1940's and 1950's as harvest levels steadily rose and clearcutting as a method for harvesting and regenerating commercial timber stands became more widely used. During the 1960's, the opposition to clearcutting became more widespread over the National Forest System and more intensified in certain regions and on certain national forests. In 1970, clearcutting became a national issue with four focal points of sharp controversy: West Virginia's Monongahela National Forest, Montana's Bitterroot, the Bridger and several other forests in Wyoming, and Alaska's Tongass.

Most of the opposition came from local citizens and a variety of local use and interest groups, who often had the support of local and State conservation, recreation, and wildlife, and related interest organizations. By 1970, however, the clearcutting issue had engaged the attention and activities of national environmental and conservation groups as well as Representatives and Senators who represented the local interests.

Critics' objections were wideranging. They argued that clearcutting destroyed wildlife habitat and caused erosion that damaged fisheries and degraded soil and water; produced unsightly landscapes and degraded scenic values; destroyed plant and animal diversity; threatened irrigation water supplies; involved overcutting in violation of the sustained-yield principle; and impaired various recreation uses and experiences. Critics also felt that national forest managers were slow in responding or unresponsive to their concerns and seldom consulted with them before implementing clearcuts. In 1965, the growing opposition led the Forest Service to mount a program to explain to the public its view of clearcutting as an effective tool of the even-aged silvicultural management method for wood production, forest regeneration, and resource management. This effort attempted to clarify apparent public misperceptions about clearcutting. The Forest Service misread its audience, because citizens believed clearcutting was a real problem for other reasons. In fact, the effort polarized some of its critics (Weitzman 1977; Cubbage et al. 1993). In many ways, the rising controversy suggested that national forest management was losing its way in heeding the guidance of Gifford Pinchot (1907):

> There are many great interests on the national forests which sometimes conflict a little. They must all be made to fit into one another so that

> the machine runs smoothly as a whole. It is often necessary for one man to give way a little here, another a little there. But by giving way a little at present they both profit by it a great deal in the end.
>
> National forests exist today because the people want them. To make them accomplish the most good the people themselves must make clear how they want them run.

In-Service Evaluation of the Clearcutting Issue on Selected National Forests

As the controversy over clearcutting intensified on the Monongahela, Bitterroot, and four national forests in Wyoming, the Forest Service appointed special task forces to review the clearcutting critics' charges and evaluate the applied management practices and their effects. These evaluations were commissioned by the regional forester for the Northern Region for the Bitterroot; jointly by the regional foresters for the Rocky Mountain Region and the Intermountain Region for the Bridger, Teton, Bighorn, and Shoshone National Forests in Wyoming; and by the Chief of the Forest Service for the Monongahela in West Virginia. No study was undertaken on Alaska's Tongass National Forest, where the Sierra Club sought an injunction against the long-term timber sale contract — 8.75 bbf in a single long-term sale — and a declaration that the Tongass had violated the MUSY Act by administering its lands predominantly for timber production. The basic harvesting method was clearcutting.

The Forest Service staffed each of these studies with experts who had not been involved with the clearcutting in question or the public issue. The experts represented a range of resource management activities. They were directed to provide an impartial, but thorough, analysis. As they initiated their investigations, they consulted with national forest managers responsible for each forest and with local citizens critical of clearcutting. They also received written responses and statements from the citizen critics.

The task forces found and reported evidence of substantial shortcomings in the way clearcutting was applied. For example, the Bitterroot Task Force reported, "Clearcutting has been overused in recent years. In many cases esthetics have received too little consideration. It is apparent to us that a preoccupation with timber management objectives has resulted in clearing and planting on some areas that should not have been clearcut" (USDA Forest Service 1970). The Monongahela Task Force reported that emphasis on timber management was leading to an imbalance among its resource programs (Weitzman 1977). The Wyoming National Forests Task Force reported similarly:

> We found much evidence of good management, but we also found indications of serious shortcomings. There was some evident damage to wildlife habitat and to soil stability. More frequently, a potential for such damage was clear.... Damage to the scenic quality of the landscape, however, was unmistakable.

The report further elaborated:

> The conflict between timber and other values is evident. These operations, carried out some years ago, have been roundly criticized, not only by the public but also by members of the timber industry and the Forest Service.... We believe there have been inadequacies in planning, in execution, and in evaluation of management actions on all four of the Wyoming Forests.... (USDA Forest Service 1971a).

All of the reports found shortcomings in multiple-use planning. The Bitterroot Task Force reported:

> Multiple-use planning ... has not advanced far enough to provide firm management direction necessary to insure quality land management and, at the same time, to provide all segments of the public with a clear picture of long-range objectives. (USDA Forest Service 1970)

The task forces recognized and reported that management shortcomings affirmed many of the local citizens' concerns about clearcutting. They made straightforward recommendations to remedy these shortcomings and avoid them in the future. But they also acknowledged that much of the management they observed on the study forests was quite adequate.

The task forces looked for deficiencies in management planning and implementation. They found that the emphasis on achieving short-term production targets often took precedence over longer-term land management. The Bitterroot Task Force report stated

Timber regeneration harvest, Snoqualmie National Forest, Washington, 1970. Immediate foreground shows excellent reproduction of Douglas-fir, western red cedar, and noble fir following 1952 clearcut. Background shows more recent clearcuts logged with high-lead cable systems. Intermediate ground shows a shelterwood harvest.

it this way: "there is an implicit attitude among many people on the staff of the Bitterroot National Forest that resource production goals come first and that land management considerations take second place." The Bitterroot report found that such emphasis was not unique to the Bitterroot and that it did not originate at the national forest level. It attributed this emphasis to "rather subtle pressures and attitudes coming from above" (USDA Forest Service 1970).

The task forces saw that the pressure to sell the full allowable cut each year to make more timber available and ease the housing materials shortage was most insistent. The Washington Office required weekly timber sale accomplishment reports to keep the Secretary of Agriculture, Congress, and outside groups informed of progress in meeting timber cut commitments — evidence of pressure from above to meet timber targets — although at the time such production control was normal in most well-managed business enterprises. Other factors contributing to shortfalls in forest resource management were related to lack of basic resource information; lack of specialized skills at the forest level in important disciplines such as landscape management, wildlife biology, soils, and hydrology; and shortfalls in quality control (no or insufficient monitoring of management activities). In a search for deeper causes, the task forces identified underlying problems of heavy workloads; shortages and frequent transfers of professional staff; youthful, less-experienced staff; and insufficient financing.

The Wyoming Task Force found that foresters with inadequate training and experience in silviculture and multiple-use coordination were making field on-sale layout and harvesting decisions because senior foresters were burdened with too many other essential duties, including NEPA compliance appeals, to give detailed assistance to these field tasks. Heavy current workloads limited opportunities to evaluate and monitor the effects of past management. The Task Force found this deficiency most obvious in assessing regeneration success, which was often found wanting.

The Bitterroot Task Force's check on the depth of experience and strength of the Forest's land management capability found that the average length of service of professional employees was 11.5 years within the Forest Service, but only 3 years and

2 months on the Bitterroot. The shortness of this experience was associated with the Forest Service's rapid growth in the 1960's — a transitional and unavoidable problem. However, the district ranger's short tenure on the forest was also associated with the Forest Service's practice of frequent transfers to broaden and accelerate the development of its foresters as managers. Broad experience was important for managerial strength in senior positions, but frequent transfers also contributed to less depth of experience for executing on-the-ground fieldwork.

Shelterwood harvest, Mt. Hood National Forest, Oregon, 1970. Harvest removes enough trees for Douglas-fir to regenerate itself and leaves enough trees to provide a seed source and shade to protect seedlings from frost damage. Overstory will be harvested when seedlings are established.

The task force reports revealed that the National Forest System and Forest Service research had adequate knowledge and capability to recognize and evaluate poor management practices and multiple-use coordination after the fact. The difficult challenge was to correct the different practices and coordination procedures and avoid such shortcomings in the future. The Forest Service Washington Office directed the regions and forests to take corrective action at the local level. But the speed and thoroughness of this local action was limited by staffing, funding, and policy that were beyond local control (Weitzman 1977). From this perspective, the Congress, the Administration, USDA, and the Forest Service's Washington Office were part of the problem (as well as part of its solution).

Chief Cliff Gives Emphasis to the Ecosystem Approach and Training

By 1970, the Forest Service hierarchy was well aware of the growing public concern and the rising number of open conflicts over how the national forest resources, especially timber, should be used and managed and the need for change. Chief Ed Cliff highlighted the challenge for more effective multiple-use and resource management in this way, when he spoke to the regional foresters and station directors on January 19, 1970, as quoted in the Bitterroot National Forest Task Force Report:

> I am convinced that with an ecosystem approach to multiple-use management, our forests and rangelands can contribute to a better living for present and future generations by providing security and stability to regional economies and rural communities. It can also provide a high-quality environment, recreation opportunities, fish, wildlife, water, forage, and timber, and be in harmony with the needs of lesser organisms. But the use of the resources must be balanced with the constraints of stewardship responsibility for we are dealing with a limited land and natural resource base (USDA Forest Service 1970).

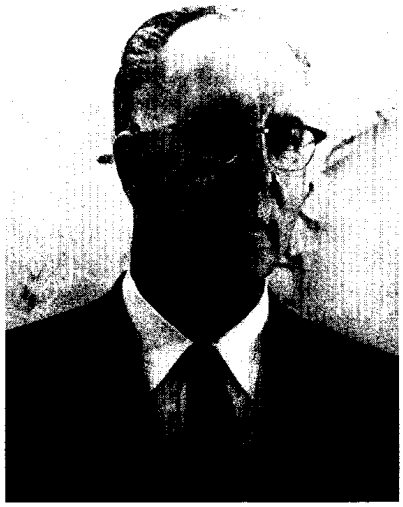
In June 1970, the Deputy Chief of the Forest Service, M.M. "Red" Nelson, wrote to regional foresters, advising them to help improve the ecological skills

of national forest professionals and suggesting some first steps to do so:

> Much is happening in ecology. The ecosystem concept is being dusted off. It now forms a popular and conceptually sound basis for management planning. Energy flows in the ecosystem give us one way to look at and predict the impacts of management actions. Functional ecology is now being emphasized above descriptive ecology in our better universities. In the face of this dynamic situation, we need to examine how well-honed our ecological skills are.
>
> Another vehicle we are testing is taped briefs of research that we should be aware of. The task of achieving agency leadership in ecology has got to include personal commitment by each Forest Service professional. Each of us has got to do what he can do to update our own professional competence. One way is by selected reading (Nelson 1970).

The readings included the six up-to-date references on ecology, ecosystems, and resource management: *Readings in Conservation Ecology*, edited by George W. Cox, 1969; *Perspectives in Ecological Theory*, by Raymond Margalef, 1969; *Environmental Conservation*, by Raymond P. Dasmann, 1968; *The Ecosystem Concept in Natural Resource Management*, edited by George M. Van Dyne, 1969; *Concepts of Ecology*, by Edward J. Kormondy, 1969; and *Ecology and Resource Management: A Quantitative Approach*, by Kenneth E.F. Watt, 1968. Regional foresters passed this guidance on to national forest supervisors:

> The ecosystem has always formed a sound basis for natural resource management planning. Energy flows in an ecosystem are analogous to cost-benefit flows in an economy. There is plenty of economic conscience in the Forest Service. Our ecology conscience could stand improving. The Washington Office is distributing the new book by Dr. Edward J. Kormondy entitled *Concepts of Ecology* to help us relate this subject to our responsibilities. We heartily endorse this approach to increased professional competence and agency leadership. The book by Kormondy is attached for your use (Cravens 1970).



Edward P. Cliff. Chief of the Forest Service, 1962–1972.

A Nationwide Field Evaluation of National Forest Timber Management

During 1970, Chief Cliff directed a team of Forest Service experts representing water, timber, wildlife, and landscape (and other recreation resources) to prepare a nationwide field evaluation of timber management practices and related national forest activities. The team's report was to highlight problem situations and pave the way for responsive actions that would attain and maintain a high level of timber productivity and environmental quality. Nothing less would be acceptable. In October 1970, when the team was evaluating timber management practices on national forests, the Chief wrote in an interoffice memorandum to all Forest Service employees:

> Our programs are out of balance to meet public needs for the environmental 1970's and we are receiving mounting criticism from all sides. Our direction must be and is being changed.... The Forest Service is seeking a balanced program with full concern for the quality of the environment (Cliff 1970).

The report, *National Forest Management in a Quality Environment: Timber Productivity*, was completed and delivered to the U.S. Senate in April 1971, as the Subcommittee on Public Lands was holding hearings on management practices on public lands. The report identified 30 problem situations where national forest clearcutting practices were being misapplied or producing undesirable adverse effects that needed to be responded to. Cliff advised the Subcommittee that the Forest Service was ready to make the changes in policy and practices the study recommended (Cliff 1971). Making these changes, however, would require more detailed information on

what had to be done in each of the 30 problem situations. (Cliff 1971; USDA Forest Service 1971b).

Congressional Hearings Elevate Clearcutting to a National Issue: 1971

National forest managers, however, were not to have the time to define and develop the changes Chief Cliff had identified. The clearcutting controversy was suddenly elevated to a "full blown" national issue in late 1970 and early 1971 and became the subject of hearings by the U.S. Senate Interior and Insular Affairs Committee's Subcommittee on Public Lands, chaired by Senator Frank Church of Idaho. An event that contributed to the national escalation of this issue was the completion of a report on the management of the Bitterroot National Forest prepared by the Select Committee of the University of Montana Faculty ("A University View of the Forest Service," November 18, 1970) and the Subcommittee's wide distribution (20,000 copies) of that report (U.S. Senate 1970). Montana Senator Lee Metcalf, a member of the Subcommittee and a resident of the Bitterroot Valley, had requested the report. He felt the University study would give an appropriate external review of the Bitterroot Valley citizens' complaints about the Bitterroot's timber management practices and serve as a useful complement to the largely technical internal Forest Service study.

The study objective was defined in this way: "to determine what the Forest Service ought to be doing, what it *was* doing, and whether its actions indeed departed from what it ought to be doing" (Bolle 1989). The University of Montana Select Committee elevated its analysis and report to a policy evaluation of the actual management practices against the management of multiple uses as defined in the MUSY Act. The University report used the Bitterroot Task Force report as a starting point for its factual findings. While it acclaimed the Task Force critique of timber management practices, it felt the Task Force gave "short shrift" to related range, watershed, wildlife, and recreation issues (Bolle 1989) and cited the "psychological impossibility of objectively criticizing one's own efforts" (Popovich 1975). The Select Committee saw the real problem as timber primacy dominating and controlling Forest Service activity. It interpreted this as a clear departure from the congressional policy of multiple use as defined in the MUSY Act. The Select Committee's report charged that "Multiple use management, in fact, does not exist as the governing principle on the Bitterroot National Forest" (U.S. Senate 1970).

The Select Committee found that the Bitterroot's terracing and planting practices following clearcuts on low-productivity fragile mountain slopes, the specific target of much of the Bitterroot Valley residents' criticisms, to be uneconomical and therefore, unjustified, even though they were usually effective for regeneration. In place of this extreme and costly practice, the Select Committee recommended "timber mining" — the harvesting of the commercially valuable timber and suspension of any purposeful regeneration efforts altogether. The Forest Service unrelentingly rebutted this recommendation. It was also questioned by many foresters and Bitterroot Valley residents, who saw "timber mining" as an absolutely alien approach to forestry (Popovich 1975).

The Select Committee found that clearcuts were too large and often used where other silvicultural systems were more suitable. The Committee found that congressional appropriations were inadequate for balanced resource management and insufficient to remedy the problem. It saw a need to add economists and other resource specialists to the Bitterroot management staff, the need to openly solicit public participation and become more responsive to it, and a need to find ways to reward and retain competent timber sales supervision and other field operations employees as opposed to promoting them to office jobs removed from field activity.

The release of the University report in late 1970 at a national press conference brought startling results. Virtually overnight the earnest concerns of the Bitterroot Valley residents were flashed coast to coast. Not only did stories appear in the national press, but seemingly in every newspaper in the Nation and some in Europe and Africa (Bolle 1989). The report findings became startling nationwide news and contributed to escalating the clearcutting controversy to a national issue. National attention was focused on both national forest management and the Forest Service as a natural resource managing agency.

Selection-forest with uneven-aged structure being formed by periodic partial harvests in a northern hardwood stand, Nicolet National Forest, Wisconsin, 1970. Next planned harvest was scheduled for 1985.

The Senate Subcommittee on Public Lands scheduled hearings on clearcutting for 5 days during 1971 (U.S. Senate 1971). More than 90 witnesses were heard; many more provided written statements. The Subcommittee also received thousands of letters from all parts of the country expressing interest in the future of the Nation's forests. Witnesses included Members of Congress, environmentalists, State officials, professional foresters and other scientists, timber and housing industry representatives, the Forest Service, BLM, and HUD.

The Subcommittee's attention was directed primarily to clearcutting practices on national forests, especially the examples in Montana, West Virginia, Wyoming, and Alaska because of the concentration of complaints about national forest practices in those States. The testimony included descriptions of perceived adverse effects of clearcutting from more than 40 national forests, mainly in the West. Environmentalists vehemently attacked clearcutting practices. But the Forest Service, the timber industry, and the Society of American Foresters strongly defended the silvicultural practice of clearcutting to regenerate certain species. Some clearcutting critics proposed a permanent moratorium on all clearcutting on Federal lands. Clearcutting supporters felt no congressional action was needed to restrict its use (U.S. Senate 1971). Despite this polarity, clearcutting as a useful regeneration practice was acknowledged by almost all witnesses. Its "misuse," however was condemned universally (Bolle 1989).

The Senate Subcommittee summed up the weight of the testimony as it reflected on national forest management, the performance of national forest managers, the role of Congress in funding national forest programs, and the need for new direction in implementing clearcutting practices. It accepted testimony that indicated that timber production had become a priority in Federal forest land management. It recognized that some critics viewed this emphasis as inconsistent with the spirit and intent, if not the letter, of the MUSY Act and NEPA. It also accepted that some critics saw national forest managers as relatively slow and unresponsive to the awakening national concern about timber harvest impacts on environmental quality. Others, however, had testified that national forest managers had been very progressive in considering multiple values and benefits. The Subcommittee, nevertheless, felt that national forest responses to environmental pressures were somewhat defensive and less than enthusiastic and aggressive. It also reported that national forest managers were having difficulties on that account in communicating with environmental critics and that the Forest Service's image was suffering as a result (U.S. Senate 1972).

The Subcommittee acknowledged that the critics were rightly critical of "government's" failure to

Commercial thinning in young Douglas-fir stand, Siuslaw National Forest, 1970. Commercial thinning removes excess commercial trees to reduce losses to natural mortality in overly dense stands. Growth of remaining trees will accelerate.

consult with the interested and affected public before, rather than after, timber management decisions were made. It reported that the "government" needed to become more attentive to increased public interests and concerns about the use and management of the public's natural resources. This included awareness that the "government" was not the owner, but the responsible manager of a public trust. The Subcommittee cited similar recommendations by the Forest Service itself from its 1971 report, *Forest Management in Wyoming* (USDA Forest Service 1971a).

The Subcommittee also recognized that the Forest Service was not a free agent and was obligated to carry out policy and direction from the Administration and Congress. The Forest Service had been pressured by such direction and had become polarized between the increasing demands of wilderness interests and environmentalists and the unrelenting demands for more timber products (U.S. Senate 1972). The Subcommittee gave the Forest Service credit for its repeated efforts to make the case for a balanced program but recognized, as evidenced by much of the hearing testimony, that funding for a balanced program had been inadequate and not fully responsive to the MUSY and NEPA statutes. The Subcommittee found that the tendency of Congress to key national forest appropriations to timber receipts influenced the Forest Service to gravitate toward timber activities. The Subcommittee encouraged the Forest Service to complete and submit the *Environmental Program for the Future,* which was still being developed, to provide a basis for balanced funding between commodity and noncommodity programs and uses and for achieving sound environmental objectives (U.S. Senate 1972).

Church's Clearcutting Guidelines: 1973

The summary of the Subcommittee report suggested policy guidelines, which became known as the "Church Guidelines," for implementing clearcutting practices and determining allowable cuts which it hoped would be quickly adopted and implemented. The Subcommittee's concerns focused on preventing land and related resource damage and on ensuring early regeneration of cutover areas. The guidelines identified four types of situations where clearcutting should not occur: highly scenic areas; areas with fragile soil, steep slopes, or other conditions subject

to major injury; areas that could not be adequately restocked within 5 years after timber harvest; and areas where clearcutting was preferred only because it would give the greatest dollar return or unit output. They provided that clearcutting be used only where it was silviculturally essential to achieve management objectives; that clearcut size be kept to the minimum needed to achieve multiple-use and silvicultural objectives; that a multidisciplinary review of potential adverse effects be made before implementing clearcutting practices; and that clearcut areas be blended into the natural terrain.

The guidelines also provided that allowable cuts be reviewed to ensure that the lands on which they were based were available and suitable for timber production consistent with the clearcutting guidelines; that any increases in the allowable cut attributed to more intensive practices be made only where the funding for such practices was assured and adequate to carry them out on schedule; and that when planned practices were not adequately funded, allowable cuts were to be reduced accordingly. Timber sale contracts were to specify all actions that needed to be taken to minimize or avoid the adverse environmental impacts of timber harvesting. Although the Church Guidelines did not have the force of law, the members of the Subcommittee on Public Lands unanimously urged the Forest Service to administratively adopt these guidelines for the national forests. Chief Cliff agreed to do so (Le Master 1984). The guidelines were later incorporated into the National Forest Management Act of 1976.

Other responses to the clearcutting issue had been considered but not implemented. For example, the Senate and House introduced several bills to ban clearcutting for 2 years while a congressional commission conducted a study. Senator Metcalf introduced a separate bill that would have required national forests to prepare "timber harvesting and land management plans" and, before deciding to clearcut, to assess its effects on all other resource values, its compatibility with maintaining and enhancing the environment, and the long-term effectiveness of alternatives to clearcutting (Wilkinson and Anderson 1985). The Forest Service and USDA opposed this bill. They argued that legislative restrictions on timber harvesting were "unnecessary and undesirable" because steps were already being taken to limit clearcutting to situations where it was the most effective, though not necessarily the least-cost silvicultural treatment. The Forest Service cited its national report on the 30 problem situations and the Forest Service's recommended solutions for them. The classification and withdrawal of areas unsuitable for timber production was already underway. An action plan responding to the 30 problem situations and solutions was completed and published 3 months after the Subcommittee report and the Church Guidelines on clearcutting were published.

In 1972, the CEQ considered recommending that President Nixon issue an Executive Order that would have required the Secretary of Agriculture to regulate timber harvesting on areas prone to serious erosion, lack of prompt regeneration, or harm to scenic, recreational, and wildlife values. It based its proposal on the findings and recommendations of a national forest clearcutting investigation contracted with five forestry schools by the Senate Subcommittee on Public Lands and other interests (Wilkinson and Anderson 1985). CEQ, however, withdrew its proposal at USDA's request and in response to intensive timber industry lobbying that an Executive Order had the force of law and would result in lawsuits to stop timber harvests.

In adopting the Church Guidelines, the Forest Service was able to maintain its administrative freedom to internally redirect national forest timber harvesting practices and clearcutting guidelines. This brought an apparent, but temporary, truce to the clearcutting controversy. Clearcutting opponents, however, remained firm and uncompromising. In 1973, they successfully brought suit against the Forest Service for violating Organic Act of 1897 provisions which, they argued, literally and effectively precluded even-aged timber management and, therefore, clearcutting (Le Master 1984).

Emergence of the National Forest Management Act of 1976

In May 1973, barely a year after the Church Guidelines had been published, a court suit to enjoin three planned timber sales that proposed clearcutting on the Monongahela National Forest dramatically

reopened the clearcutting issue. The 1973 court suit, filed in Federal district court by the West Virginia division of the Izaak Walton League, charged that the proposed Monongahela timber sales were in violation of the Organic Act of 1897's authority for selling and harvesting timber. The 1897 Act authorized the Secretary of Agriculture to designate and appraise "dead, matured or large growth of trees" on national forests and sell them providing that "such timber, before being sold shall be marked and designated and shall be cut and removed." The plaintiffs argued that the trees in the proposed sales were not dead, physiologically mature, or of large growth; would not be individually marked prior to cutting; and would not be completely removed after cutting (Le Master 1984).

The court suit was not just a local complaint. It was a joint effort of the Natural Resource Defense Council (NRDC), the Sierra Club, and the Izaak Walton League (Sweetland 1978). The NRDC examined a number of forests, including the Bitterroot, before focusing on the Monongahela National Forest for the purposes of the suit (Bolle 1989). The plaintiffs' purpose in this suit was broader than just stopping clearcutting. They wanted to focus the attention of Congress on timber management and sought a strict interpretation of the law with respect to clearcutting (Sweetland 1978).

The Forest Service was confident of a favorable outcome. Its attorneys did not contest the findings of fact, but argued the case on issues of law. On the day the suit was filed, the District Court for the Northern District of West Virginia issued a restraining order against sales involving clearcutting on the Monongahela Forest. Because a district court ruling favorable to the plaintiffs seemed likely, Senator Humphrey and Senator Herman Talmadge of Georgia, while awaiting the ruling, accepted a staff proposal to clarify the legal language of the Organic Act with an amendment to the draft RPA bill. The Forest Service and the timber industry both objected to introducing such correcting language in the draft RPA bill, so the proposal was dropped (Sweetland 1978).

In November 1973, the district court issued an opinion in favor of the plaintiffs. The Government attorneys had argued that changing silvicultural requirements and national timber demands required an unrestricted definition of "matured," as used in the Organic Act. The Forest Service view of "matured" hinged on a flexible, economic interpretation. The district court, however, saw the original usage in a physiological context and also advised that if modern times required the Organic Act to be changed, Congress should do it (Clary 1986; Cubbage et al. 1993).

The Forest Service decided to appeal the district court's decision in the Court of Appeals for the Fourth Circuit. It also asked Senator Humphrey to amend the Organic Act by providing corrective language in the draft RPA bill. Senator Humphrey referred the Forest Service to Senator Talmadge, who responded that the Forest Service had requested that such language be removed from the draft RPA bill and would have to live with that decision (Sweetland 1978). In August 1975, the court of appeals affirmed the West Virginia district court's decision (Wilkinson and Anderson 1985).

The fourth circuit decision immediately raised two dilemmas for the Forest Service: (1) how extensively the decision would eventually be applied and (2) whether to appeal the decision to the Supreme Court. The district court decision created a real threat of mill closures in areas dependent on national forest timber — primarily the West. In the fourth circuit's five-State jurisdiction — Maryland, West Virginia, Virginia, and North and South Carolina — the Forest Service quickly found that most national forest timber harvest practices were in violation of the court order, compelling the Forest Service to reduce its timber sales for the balance of FY 1976 to 20 million board feet in the five-State area. Harvesting would be limited primarily to salvage of dead and dying trees. This reduction, however, did not involve a large impact on mills and employment in these States because national forests were only a small part of the timber supply (Sweetland 1978; Le Master 1984).

Because western national forests made up 34 percent of the western timber supply, an extension of the decision to the West would have caused many more serious impacts. Application of the Mononga-

hela decision to the West could have reduced the national forest share of western timber supplies by 50 percent. This would have led to significant mill closures and unemployment and resulted in an increase of more than 15 percent in long-term wholesale lumber prices and even greater inflation in wholesale plywood prices. Short-term price impacts would be even more severe. A solution became urgent. The Federal District Court for Alaska adopted the Monongahela decision in ruling on a second court suit on the Tongass National Forest, filed by Zieske, to enjoin clearcutting on one of the ongoing long-term timber sales. This clearcutting restriction on timber that had been sold went beyond the Monongahela decision, which had enjoined only planned sales (Sweetland 1978; Le Master 1984).

The Forest Service initially pursued a Supreme Court appeal of the Monongahela decision. The Forest Service also weighed other legislative options. An appropriations bill rider to correct the Organic Act's language was rejected. The proposal for a separate bill to do the same was likewise dropped. A legislative 2-year moratorium on implementing the court decision was prepared and considered, but it was seen as a "quick-fix" approach and not acceptable to Congress. Amending the Organic Act or RPA legislation to go beyond revising the Organic Act's language and provide national forest timber harvesting guidelines received more extended consideration. In the end, the Forest Service decided to amend the RPA legislation. (Sweetland 1978).

The Forest Service and the Administration worked on a draft amendment to RPA for several months in late 1975 and early 1976. Participants in addition to the Forest Service and USDA included the CEQ, the Council of Economic Advisors, the Domestic Policy Council, and OMB. There was continual difficulty in obtaining agreement, particularly from OMB. As the time for hearings on other bills introduced by members of Congress neared, the Administration agreed to cease seeking agreement and instead to report on the legislation that would be proposed by Congress. It also agreed, at the request of Forest Service Chief John McGuire, that the Forest Service would prepare a draft paper on the appropriate content of such legislation and share it with the Senate Committee on Agriculture and Forestry and any other members of Congress who wished to use it. The staff modified and combined the Forest Service draft proposal with materials it had previously prepared for Senator Humphrey, who then introduced the unified draft as S. 3091.

Senator Humphrey had asked his staff for a bill that would permit professional forest land managers sufficient flexibility to manage the national forests and, at the same time, support the principles of multiple use and sustained yield. As first introduced, the Humphrey bill had five sections. Its principal component was section 3 — an amendment to section 5 of the RPA, on land management planning. It proposed that the Secretary of Agriculture provide for public participation in the preparation and review of individual national forest land management plans. It also directed that the Secretary promulgate a number of regulations, including guidelines for national forest land management plans relating to suitability of lands for resource management, including timber harvesting; using the system or systems of silviculture for growing and harvesting trees and products, protecting the forest, and managing water, soil, fish and wildlife, range, esthetic and recreational resources, including wilderness; special or unique requirements for coordinating the multiple uses and protecting all resources; ensuring sustained yield of the various resources; and preparing and revising resource plans using an interdisciplinary review.

The authors of the Humphrey bill believed that conflicts over the use and management of the national forests could be resolved or avoided through proper land management planning with active public participation (Sweetland 1978; Le Master 1984). A counterpart to the Humphrey bill was introduced in the House as H.R. 12503. Members of Congress introduced a total of 10 additional bills to respond to the fourth circuit court's decision on clearcutting: seven in the House and three in the Senate. The hearings, however, focused on just two Senate bills, S. 3091, sponsored by Senator Humphrey, and S. 2926, sponsored by Senator Jennings Randolph of West Virginia.

The Randolph bill was a comprehensive reform proposal with numerous specific prescriptive standards for timber management. Unlike the Humphrey bill,

which was drafted by the Senate Committee staff with considerable Forest Service input, the Randolph bill was written by a citizens' committee with Senate Committee staff support. Senator Randolph believed that Congress "must set standards and procedures that will insure the preservation and productivity of our forests." He felt this responsibility should not be left to the discretion of the Secretary of Agriculture or bureaucrats and technocrats who "already rule and regulate too much." It was the duty of Congress to set standards, outline procedures, put curbs on the Secretary's discretion, and make goals clear and prohibitions certain. The citizen members of the committee who wrote the bill included Arnold Bolle, chairman of the Select Committee that had written the University of Montana report on the Bitterroot National Forest for Senator Metcalf in 1970; Ralph Smoot, a Forest Service retiree; Dr. Leon Minckler, a silviculturist and an advocate of the uneven-aged hardwood timber management with the State University of New York College of Environment and Forestry; representatives of the Sierra Club's Legal Defense Fund and the Izaak Walton League of America; and the private attorney who represented the plaintiffs from the Izaak Walton League in the West Virginia district court suit. The bill proposed legislative standards and limitations on determining lands from which timber could be sold; estimating sustained yield; using even-aged and uneven-aged management; clearcutting; harvesting immature timber; marking and designating timber for sale; supervising timber harvests; converting tree species; length of timber sale contracts; protecting soil, fish, and wildlife resources; preparing and controlling forest management plans; and accounting methods for timber sales (Sweetland 1978; Le Master 1984).

The Forest Service opposed Randolph's bill and supported Humphrey's, which tracked closely with many of the provisions the Forest Service had suggested in its draft statement of content for appropriate legislation. The Forest Service also worked closely with Senator Humphrey's staff during the hearings, markup, and conference actions on S. 3091. Other supporters of S. 3091 included the timber industry, SAF, AFA, the National Wildlife Federation, the Wildlife Management Institute, the National Association of State Foresters, and the International Association of Game, Fish and Conservation Commissioners. Witnesses who supported the Randolph bill included representatives of the Izaak Walton League, the National Audubon Society, the Sierra Club, and the Coalition to Save Our National Forests. The testimony of the panel representing the International Association of Game, Fish, and Conservation Commissioners was particularly damaging to the Randolph bill. Its five panelists each testified that enactment of S. 2926 would "tie the hands" of professional land managers. In the Senate, all but two of the senators testifying supported the Humphrey bill. In the House, all congressmen giving testimony on the proposed bill, other than Senator Randolph, supported the Johnson bill, the House counterpart to Humphrey's bill (Sweetland 1978; Le Master 1984).

The Senate passed the Humphrey bill after making extensive revisions, most of which reflected some aspect of the Randolph bill, but with less specificity. For example, the Randolph bill specified a maximum size of clearcuts. The amended Humphrey bill did not, although the Senate Committee made it very clear that they expected the Secretary of Agriculture to write specific guidelines on clearcut size in the legislation's implementing regulations. The House approved a generally less restrictive bill. Since the House and Senate had passed somewhat different bills, they had to go to conference for reconciliation.

Three issues made reconciliation challenging: the form of congressional guidance for managing national forests, timber harvesting from lands not suited for timber production, and constraints on the amount of timber national forests could sell each year — the nondeclining flow provision.

The first issue was resolved by adopting the approach and many of the planning guidelines from the Senate bill. The regulations for implementing the guidelines were to be promulgated by the Secretary of Agriculture and would include the Church Guidelines (Le Master 1984).

The issue of harvesting on lands unsuited for timber production was resolved by making it clear that such lands would not be identified solely on the basis economic criteria but "take account of physical, economic, and other pertinent factors to the extent

feasible." There would be no timber harvesting on lands unsuited for timber production for 10 years, except where harvesting was needed to meet other resource objectives or salvage. After 10 years, such lands could be reviewed for timber harvest suitability and, if found suitable, could be returned to timber production (Le Master 1984).

The issue about the nondeclining flow provision related to its inflexibility. Washington State Congressman Tom Foley made a strong point that, unless more flexibility was provided, there would be powerful political opposition to wilderness designation on national forests. A basic understanding that a strict nondeclining flow policy would reduce the possibility of offsetting an allowable cut reduction on one forest due to wilderness designation with an increase on another led to an agreement to modify the Senate's version.

The National Forest Management Act (NFMA) was signed into law by President Ford on October 22, 1976 (Le Master 1984). NFMA reaffirmed the policy objectives of the MUSY Act and explicitly added wilderness to the multiple-use purposes of national forests (Le Master 1984).

NFMA brought the persistent clearcutting issue to a new climax and a new, but transient, truce for the balance of the 1970's. The Act also transformed the administrative Church Guidelines into national forest management legislative direction and added several more guidelines for managing multiple uses. In theory, NFMA provided the first set of national, comprehensive written standards and guidelines for planning and managing multiple uses on national forests. Although it was the concerns and issues raised by environmental interests and many local users of national forests that led to the enactment of NFMA, national forest managers, nevertheless, remained important participants and contributors to writing its guidelines. National forest managers made an important initial contribution by developing and administering the Church Guidelines and subsequently in developing NFMA's implementation standards and guidelines, which were to be incorporated into forest plans as soon as possible. Until such forest plans were completed, approved, and implemented, national forest lands continued to be managed under existing plans. The development, review, and revision NFMA plans provided for and fostered public participation. The Secretary of Agriculture appointed a committee of scientists from outside the Forest Service to provide scientific and technical advice and counsel in promulgating the NFMA's implementing regulations and to ensure the use of an effective interdisciplinary approach. The Forest Service was given 2 years to promulgate these regulations. The final regulations were actually issued 3 years later and went into effect in November 1979.

NFMA plans were to determine forest management systems and harvesting or use levels and procedures for all the uses identified in the MUSY Act and be consistent with its definitions for "multiple use" and "sustained yield" as well as with the availability and suitability of lands and resources for the various multiple uses. The regulations would spell out guidelines for identifying the suitability of land for the various uses and the appropriate direction for resource management; obtaining resource inventory data; developing methods of identifying special situations involving hazards to resources such as riparian areas, unstable lands, or endangered species; ensuring that both the economic and the environmental aspects of alternative resource management systems be considered; providing for a diversity of plant and animal communities; ensuring evaluation of the effects of each management system through continuous monitoring and assessment in the field and related research on those potential adverse effects to avoid substantial or permanent impairment of land productivity; and permitting timber harvest increases where they were supported by intensified management practices. Timber harvests, however, were subject to the Church Guidelines, which were specifically spelled out (with minor changes) in NFMA.

NFMA also endorsed the nondeclining flow policy that had emerged from the 1969 Douglas-fir study findings. The nondeclining flow policy permitted national forest harvest increases only where such increases could be sustained in the long term without any decreases. However, NFMA allowed temporary harvest increases in the nondeclining flow policy, where they were needed to meet "overall multiple-use objectives." Such departures had to be

consistent with the multiple-use management objectives of each forest plan. The ceiling for nondeclining flow harvests was the quantity of timber that could be harvested in perpetuity — on a sustained-yield basis. The long-term sustained-yield level would be determined by the average annual growth that the next tree crop would produce with the current management intensity. Rotation age would be based on the culmination of mean annual increment (the age at which the average annual cubic volume growth of a timber stand reaches its maximum level). The basic requirements for national forest multiple-use planning were now written in law. The plans emerging from them would be legal documents and their implementation would be subject to appeal and judicial review.

The NFMA requirements reflected much of what national forest managers had been trying to achieve in repeated revisions of the multiple-use planning process during the 1970's (as discussed in the next chapter). The ultimate test of these new multiple-use planning and national forest management standards and guidelines lay in the future, in the way NFMA guidelines worked out on the ground, and in whether the public would perceive the benefits they provided as generally worthwhile.

Wilderness Planning and Designation

By 1970, the national forest component of the National Wilderness Preservation System included 61 wilderness units totaling 9.9 million acres and 27 primitive areas totaling 4.4 million acres. As directed in the Wilderness Act of 1964, six primitive areas had been evaluated and revised, and their wilderness designation recommendations were before Congress. The remaining 21 areas were undergoing evaluations that were scheduled to be completed and presented to the President and Congress by September 1974 (USDA Forest Service 1975).

During the 1970's, the national forest wilderness planning process continued to come under intense public scrutiny and judicial review. Much of the controversy between wilderness advocates and national forest managers was about the designation as wilderness of lands not included in national forest primitive areas and the restriction of wilderness designation to lands meeting the Forest Service's pristine criteria for wilderness. For example, in 1992, when Colorado's White River National Forest proposed to extend logging to East Meadow Creek, a largely undeveloped area directly west of the Gore Range – Eagles Nest Primitive Area, it was strongly protested by wilderness proponents. The area had been accessed by a truck trail for bark beetle control and therefore did not meet the Forest Service's pristine wilderness criteria. The regional forester sought compromise solutions, but they were not accepted. Eventually, in 1969, the Sierra Club, 12 citizens of Vail, and several conservation organizations filed a court suit for a preliminary injunction against the Forest Service. The plaintiffs argued that the Wilderness Act provided that "nothing herein contained shall limit the President in ... recommending the addition of any contiguous area of national forest lands predominately of wilderness value." The district court ruled in favor of the plaintiffs in 1970 and the Tenth Circuit Court upheld the ruling in 1971. The Supreme Court declined to hear a further appeal (Roth 1984).

Similar controversy over the development of the Lincoln Back Country on Montana's Helena National Forest emerged in 1960 and continued into the early 1970's. When residents of the town of Lincoln and people who used the area for hunting, fishing, hiking, and camping got wind of the Forest's plans to develop areas for timber and general recreation, they repeatedly and successfully opposed alternative plans and efforts for its development. A one-lane dirt access road accessed the area from the west and east and apparently had disqualified it as a primitive area, even though it was separated from the Bob Marshall Wilderness — the jewel of the national forest wilderness system — only by the Scapegoat Mountains. In 1969, the U.S. Senate expanded the Lincoln Back Country area to include the Scapegoat Mountains and proposed it for wilderness designation in the same year. The Chief of the Forest Service placed the area's development plans on hold until the Helena, Lolo, and Lewis and Clark National Forests could take another look at its future. In 1971, these national forests drafted a wilderness proposal, which the regional forester endorsed. In 1972, the House passed legislation designating the

area as the Scapegoat Wilderness. The Scapegoat Wilderness became the first *de facto* wilderness designated by Congress that was not previously classed as a primitive area (Roth 1984).

Roadless Area Review and Evaluation (RARE)

National forest managers recognized early on that Congress could and would add "other suitable lands" to the primitive areas they had set aside for the national forest component of the National Wilderness Preservation System (USDA Forest Service 1966). In 1964, the four-person national forest team drafting the policy guidelines for implementing the Wilderness Act recommended that national forest roadless areas not included in primitive areas be studied for possible wilderness designation. Three years later, Chief Cliff directed regional foresters and national forest managers to inventory all previously unclassified roadless areas larger than 5,000 acres for wilderness potential. National forest managers were having trouble determining where they could plan and carry out timber sales in roadless areas and where such management would be opposed by wilderness advocates who filed lawsuits or by Congressmen who proposed wilderness. They needed to sort out which roadless areas were available for development and which would be recommended to Congress for wilderness designation (Roth 1984). To avoid aggravating Congress, development activity was stopped on all areas where wilderness legislation was pending.

By 1971, regional foresters had inventoried a total of 1,449 roadless and undeveloped areas containing 55.9 million acres. Except for two areas in the East and one in Puerto Rico, all areas were in the West. The national grasslands and eastern national forests were generally excluded because they did not meet the "pristine" criteria — a disappointment to many environmentalists (Roth 1984).

Chief Cliff, in the same year, initiated Roadless Area Review and Evaluation (RARE) for all areas of more than 5,000 acres not previously classed as primitive areas. This action coincided with the Colorado district court's decision in the East Meadow Creek case. Regional foresters were to recommend areas with wilderness potential to the Chief. The Chief, in turn, would select areas for wilderness study and announce them in 1973. RARE had five specific objectives: to obtain the most wilderness relative to costs, to disperse the system over the United States, to represent as many ecosystems as possible, to obtain the most wilderness with the least impact on timber, and to locate wilderness areas as close to cities as possible (USDA Forest Service 1974a).

National forest supervisors and regional foresters asked organizations and individuals to express their views and suggestions on additions, deletions, and revisions to the areas they inventoried for wilderness potential and to identify those they felt should receive more in-depth wilderness consideration. The total public involvement effort for RARE became one of the most extensive undertaken by any Government agency to that time. It included mass mailings to key people and organizations; presentations to public and private groups; reports to and meetings with other Government agencies; communications by radio, television, and newspaper media; conferences with advisory boards and groups; advice from *ad hoc* committees; and public discussion sessions. The Forest Service provided maps of roadless areas and undeveloped lands to help the public review and comment on potential wilderness candidate areas. National forest managers even discussed individual candidate areas with the public. In all, 300 meetings attracted 25,000 people and provided more than 50,000 oral and written comments (Karr 1983; Roth 1984; USDA Forest Service 1974b).

In June 1972, regional foresters submitted their recommendations to Chief Cliff, and in January 1973, Chief McGuire released a draft EIS identifying 235 proposed wilderness study areas. This draft EIS generated 8,000 written comments from a wide range of interested people. Some areas were dropped. But, on the basis of public comments, recommendations from members of Congress and other Government agencies, and improved data, other areas were added to the final list of new study areas. In the spring of 1973, 274 areas encompassing 12.3 million acres were selected for further study. National forest managers or Congress had previously identified some 4.4 million acres for further wilderness study; the EIS analysis and recommendations had added 7.9 million acres (Roth 1984; Karr 1983; USDA Forest Service 1974b).

The selection of these areas became a turning point both for the RARE initiative and the acceleration it was intended to give to wilderness designation and the release of undesignated roadless areas for timber management and other development. When the regional foresters submitted their wilderness study area proposals to the Chief in 1972, the Sierra Club filed a NEPA lawsuit with the Federal district court in San Francisco. This suit slowed the RARE process. The plaintiffs argued that the RARE review of the California roadless areas was grossly flawed, in violation of NEPA, and asked for a preliminary injunction to halt all timber sales and other developments in those roadless areas. In 1972, the court issued a temporary injunction in favor of the plaintiffs. The court viewed wilderness as a management option on all inventoried roadless areas and assumed that any management decision to develop resources on any of these areas would significantly affect a roadless area's wilderness potential. The apparent "non-decision" or "non-action" as claimed by the Forest Service in not designating a roadless area as wilderness was seen by the court as a partial decision to make timber on such areas available for harvesting (Wilkinson and Anderson 1985). Therefore, the court ordered any timber harvesting, road building, or other actions that would alter the wilderness character of the RARE roadless areas to cease and prohibited making any contracts that would change the wilderness quality of such areas without first preparing a NEPA EIS. This became known as the "Conte Decision."

The Forest Service agreed to comply with the court order, even though it greatly increased the complexity, cost, and data needed for evaluating the wilderness study areas as well as resource management planning for the remaining roadless areas. On this basis, the Federal court dismissed the suit without prejudice, ruling that the plaintiffs' suit was premature because no national forest decisions had yet been made that could be judged as damaging (Karr 1983). With the passage of time, national forest managers conceded that RARE had been flawed by not fully meeting all NEPA requirements, while environmentalists came to acknowledge that it was an important step in building the public's awareness of *de facto* wilderness areas and their full extent (Roth 1984).

For the next few years, the wilderness study area evaluation and recommendation process slowed to a snail's pace as national forest managers prepared individual comprehensive NEPA EIS's for each selected study area. The slowness of the process brought frustration to many people at a time when early decisions on resource use in the roadless areas were needed, particularly for oil and gas development, timber harvesting, and mineral exploration (Karr 1983).

During the mid-1970's, RARE was conducted in conjunction with the unit planning process. The 12.3 million acres of roadless areas selected for further wilderness study received "detailed and in-depth" evaluation. The balance of the roadless areas, 43.6 million acres, did not qualify for intensive study for wilderness designation. The process continued to move slowly as national forest managers acted to overcome the recognized shortcomings in the earlier RARE efforts. For example, some contiguous areas had been subdivided and reviewed separately rather than as a whole. Boundaries of some inventoried areas had fallen short of their actual state of roadlessness. Some roadless areas had been completely missed. Some regions used their own variation of National Forest System-wide criteria, introducing inconsistency into the review process (Wilkinson and Anderson 1985).

Eastern Wilderness and Congressional Disavowal of the Pristine Doctrine

While the Forest Service was striving to accelerate wilderness designation in the West, public pressure was growing for designating wilderness areas in the East. Interest mounted in 1970 as Congressmen from West Virginia and Alabama introduced bills to designate wilderness on national forests in their States. During RARE, national forest managers had begun to discuss options for managing undeveloped areas in the East that did not meet their pristine criteria for wilderness. In the summer of 1971, they agreed upon a concept of "wild areas" as distinct from wilderness areas. Wild areas would be used mainly for recreation enjoyment, whereas wilderness areas would be set aside primarily as a resource of wilderness for the Nation as a whole. Wild areas, therefore, would require their own enabling legislation. Unlike wilderness areas, wild areas needed primitive recreation

facilities and some development to protect the environment, but, they would exclude grazing and mining. The Associate Chief of the Forest Service announced the wild area concept and the Forest Service's intention at the September 1971 Conference of the Sierra Club on Wilderness to solicit broad public participation in the process of creating such a system. This initiative helped set a general public campaign for eastern wilderness in motion (Roth 1984).

In September 1972, the Senate passed the National Forest Wild Areas bill, S. 3973, which was widely perceived as a statutory expression of the national forest "purity" doctrine for wilderness (Roth 1984). It distinguished between the wild areas of the East, which would be restored to a primitive state, and the western wilderness areas, which had to be unspoiled by human activity.

Congress ultimately rejected the purity or pristine argument. Wilderness areas did not have to be "untrammeled by man." So long as any evidence of past human activity was "substantially unnoticeable," undeveloped areas could qualify as wilderness. Congress enacted the Eastern Wilderness Act in December 1974, establishing 16 new eastern wilderness areas totaling 210,000 acres and 17 eastern wilderness study areas. The Eastern Wilderness Act differed from the Wilderness Act of 1964 only in authorizing the condemnation of private lands that fell within the eastern wilderness boundaries (Roth 1984; Le Master 1984).

In the 6 years between 1972 and 1978, Congress added 3.08 million acres to the National Wilderness Preservation System. Wilderness interests continued to challenge the Forest Service's "pristine" criteria and were often instrumental in delaying timber sales and, in some cases, precluding timber management altogether (Karr 1983; Roth 1984). In 1976, wilderness interests proposed that Congress directly designate several areas scattered throughout the West that had not been included in the RARE wilderness study selections. These areas had not conformed to some aspect of the pristine criteria. For example, some areas had been excluded because they were close to urban areas and did not meet the "sights and sounds" standard.

In January 1978, Congress designated 17 such areas totaling 1.23 million acres with the passage the Endangered American Wilderness Act. The final committee report on this legislation directed the Forest Service to dispense with its pristine doctrine for wilderness designation, since accessibility of wilderness-quality lands to nearby urban centers actually enhanced their value as wilderness (Roth 1984). Wilderness designation, however, remained slow, even though the average area designated per year in the mid-1970's exceeded that of the late 1960's and early 1970's by almost three times.

RARE II

RARE II emerged in 1977 with the inauguration of President Jimmy Carter and a new administration favoring environmental action. President Carter named Rupert Cutler, an active wilderness advocate supported by the Sierra Club, the Wilderness Society, and other environmental interests, as the Department of Agriculture's Assistant Secretary for Natural Resources and Environment. In this role, Cutler oversaw Forest Service and National Forest System programs and management. The new administration's appointments distressed some members of the timber industry. So, when they had the opportunity to meet with the Secretary of Agriculture and his new assistant secretary, the industry implored them to accelerate the roadless area process. The industry wanted early relief from the continuing uncertainty over national forest timber supplies and the effects RARE had on the industry's plant investment and operating decisions (Roth 1984; Le Master 1984).

USDA responded with a second Roadless Area Review and Evaluation, which became RARE II (the first RARE process was renamed RARE I). In April 1977, Assistant Secretary Cutler announced RARE II to congressional committees that were holding hearings on the proposed Endangered American Wilderness Act of 1978. He promised that RARE II would step up the rate of national forest roadless area recommendations for wilderness preservation and reduce the uncertainty about available timber supplies and related industry investment decisions (Le Master 1984).

RARE II used the NEPA process and went beyond selecting areas for further in-depth wilderness study.

To help resolve as much of the uncertainty as possible about the future use and management of extensive roadless areas, the nationally led forest planning and decision process would actually recommend areas for wilderness designation and others, not so designated, for "release" for nonwilderness use and management. Areas that could not be clearly allocated to one of these two categories would be designated for further planning. Based on the internal feasibility analysis of the RARE II proposal by national forest managers, there was only a very slim chance that a nationally led NEPA study and EIS would resolve the wilderness issue. More likely, the EIS would be challenged in court and the roadless areas would be slowly allocated through separate legislation for entire States. And that is what actually occurred!

Even though national forest leadership was not enthusiastic over the RARE II process and would not have undertaken it on its own, the Forest Service responded positively and constructively to USDA's policy direction to implement it. RARE II's objectives were to "round out" the national forest portion of the National Wilderness Preservation System (for which the 1975 RPA had set a goal of 25 million to 30 million acres), to reduce the study time for most inventoried roadless areas, and to expedite release of areas with primary multiple-use values other than wilderness (Roth 1984; Le Master 1984).

The Assistant Secretary reserved the overall direction of the effort and final decisionmaking to himself and established a three-person executive staff in his office to provide the strategic planning and leadership for RARE II. The Forest Service role was limited to implementing the process and recommending the allocation of roadless areas for wilderness designation, further study, or nonwilderness use to the Assistant Secretary — an unprecedented USDA approach to major planning and decisionmaking for national forest management. The Assistant Secretary set an almost impossible completion deadline of December 31, 1978. He selected the Forest Service director of recreation to lead his executive staff, and he recruited the assistant director of recreation, a former wilderness planner who had been recruited from the National Park Service, and an officer of the Wilderness Society to fill it out. This staff developed a NEPA-consistent design for RARE II. It had two stages: first, inventorying each roadless area for potential designation, and then evaluating each for allocation to wilderness, nonwilderness, or further planning. The design included various processes for informing people and organizations about RARE II, collecting resource data and public input critical to the inventory and evaluation stages, analyzing the resource data and public input for individual roadless areas, and making the decision itself.

These processes were designed from the top down and executed generally from the bottom up. They were characterized throughout the RARE II effort by two-way communications from the ranger district and national forest levels to the regional teams and the Washington steering group, and to the Assistant Secretary and his executive staff and back again.

This departmental approach to RARE II essentially withdrew the local national forest manager's authority to recommend the allocation of roadless areas to wilderness and nonwilderness and redelegated it to the Assistant Secretary. When RARE I collapsed due to the Conte Decision, the Forest Service agreed to introduce the NEPA approach into national forest planning and with that address the question of suitability of roadless areas for wilderness designation. The RARE II approach perceived the roadless area allocation problem to be a political problem to be resolved through the Administration rather than a professional management process — although the latter was necessary to develop the information needed for such resolution and decisionmaking (Karr 1983; Le Master 1984).

Chief John McGuire delegated the leadership for national forest implementation of RARE II to his Associate Chief Rex Ressler, who named the Deputy Chief for National Forest Systems, Tom C. Nelson, and several regional foresters to a steering group to oversee, staff, and manage the implementation process. Although the Chief also directed deputy chiefs and regional foresters to give top priority to meeting the tight deadline within the available existing resources, he did not provide additional staffing or funding. He further cautioned that RARE II not be carried out at the expense of the Forest Service's ongoing mission (Karr 1983).

The RARE II inventory stage was completed in the fall of 1977, following the massive public involvement. National forest managers prepared an initial roadless area inventory using the Wilderness Act's minimum wilderness designation criteria. During the summer of 1977, the public was invited to participate in more than 227 workshops throughout the Nation and to suggest changes to the inventory as well as criteria for evaluating areas for wilderness and nonwilderness. More than 50,000 people provided comments and suggestions. National forest staff collected and summarized resource inventory data. Forest supervisors and district rangers and their staffs conducted the public workshops. Most participants considered the workshops effective in reaching organized groups; however, some noted weaknesses in communications with State government, local people who were not affiliated with organizations, and nontraditional public. The inventory identified 2,686 roadless areas encompassing 62 million acres in 38 States (Karr 1983). This compared with the 1,449 areas and 56 million acres inventoried in RARE I. The large increase in the number of areas inventoried in RARE II mainly reflected the inclusion of hundreds of relatively small wilderness candidate roadless areas on eastern national forests that had not been included in RARE I. The total RARE II inventoried area, however, was only about 11 percent greater than that in RARE I.

The preparation of a draft EIS based on inventory data, public input, and other resource information began the evaluation stage. USDA issued the draft EIS for public review in June 1978. The draft EIS presented 10 alternative allocations for 2,686 roadless areas totaling 62.1 million acres. USDA did not identify a preferred alternative. The RARE II staff and national forest managers explained the RARE II process and its draft alternatives to the public in briefings, called "open houses," conducted across the country. At the briefings, they answered questions about the process and draft alternatives. The USDA asked the public to express and explain their preferences for allocating individual areas to wilderness, nonwilderness, or further planning. It also invited the public to identify its preferred allocation alternative for USDA consideration in deciding upon roadless area allocations and the decision criteria for determining suitability of roadless areas for wilderness designation or management for multiple uses (Karr 1983).

Public response was immense, even exceeding the record RARE I public participation. Some 360,000 people provided more than 264,000 letters, reports, petitions, resolutions, coupons, and response forms. Most addressed preferences and reasons for allocating specific roadless areas, but many comments suggested alternative approaches and decision criteria. Respondents favoring nonwilderness allocations cited economic benefits and jobs, timber production, and access to resources as their criteria. Those favoring wilderness often cited scenery, solitude, the wilderness heritage, and additions for increasing both the diversity and quality of the National Wilderness Preservation System. However, the number of responses supporting nonwilderness allocations for roadless areas exceeded those for wilderness by of 3 to 1 (Karr 1983).

The final 10-step decision process used both the draft EIS information and its public response data. This resulted in the final EIS's selected alternative, which the Secretary of Agriculture released to the public on January 4, 1979. The final EIS recommended 624 roadless areas, encompassing 15.1 million acres, for wilderness; 1,981 areas with 36.2 million acres for nonwilderness; and 314 areas with 10.8 million acres for further planning. The wilderness allocation, when added to the 12 million acres already designated as wilderness, was developed to coincide with the 1975 RPA program wilderness goal of 25 million to 30 million acres. It also satisfied RARE II mid-level targets for wilderness accessibility and distribution as well as low-level targets for land form, ecosystem, and wildlife representation. Roadless areas with high wilderness attribute ratings were proposed by USDA for wilderness or further planning, except for those areas where such an allocation would result in substantial adverse local impacts on employment and community stability. Such areas were allocated to nonwilderness uses. Roadless areas with proven mineral or energy potential or with high potential for producing mineral and energy resources were allocated to nonwilderness or further planning to avoid foreclosing valuable mineral options without further evaluation. The decision process also reviewed the consistency

of allocations with the 1975 RPA program goals for timber, recreation, and grazing. It included several other criteria suggested by public responses. Each regional forester reviewed the allocations for meeting RPA program goals for his region. The Forest Service's Washington Office RARE II staff tested and adjusted regional allocations, as needed, to achieve consistency across regions in the use of the decision criteria and compared the preferred alternative with the 10 draft EIS alternatives to ensure its superiority. Rupert Cutler, working with his RARE II executive staff, USDA representatives, and the Chief of the Forest Service, made final decisions that took into account national policy criteria such as housing starts, trade balances, treasury revenues, inflation control, and national employment goals.

Wilderness interests such as the Sierra Club, the Wilderness Society, Friends of the Earth, and the National Audubon Society were acutely disappointed with the RARE II wilderness allocations. They felt they were too small. Commodity industry representatives, including the National Forest Products Association and the Rocky Mountain Oil and Gas Association, felt the wilderness allocations were too large (Le Master 1984).

USDA scheduled 2 months for the RARE II final EIS review and comment by other Federal agencies, members of Congress, and governors of States. President Carter considered their comments and suggestions when he announced his decision on April 16, 1979. He recommended 15.4 million acres for wilderness use, slightly more than was recommended in the final EIS; 36.0 million acres for nonwilderness use; and 10.6 million acres for further study (Le Master 1984). The recommendations reflected White House agreement with the forest products industry to not increase wilderness allocations in the Pacific Northwest. The industry, in turn, agreed to support President Carter's proposal for a national Department of Natural Resources that would include the Forest Service (Roth 1984).

Environmental interests were dissatisfied with the final EIS recommendations and convinced the Administration not to submit omnibus RARE II legislation to Congress. Environmentalists argued that they needed a free hand to address legislative options for implementing RARE II and in dealing with Congress to repair some of RARE II's damage to their goals for further wilderness designation (Roth 1984).

From the beginning, all interests had widely supported the general purposes of RARE II. However, some of the public raised issues about its time limitations on public responses, data adequacy, and methodology. These critiques intensified with the release of the draft and final EIS's. In announcing his RARE II decisions, President Carter observed that the determination of national forest best uses had been slow and piecemeal and a source of frustration and controversy for all interests for many years. RARE II had provided a comprehensive nationwide review and evaluation of the national forest lands in question. He hoped his recommendations would help resolve the longstanding controversy over the use of roadless areas (Le Master 1984).

Omnibus RARE II legislation received little congressional support. It took Congress until the end of 1979 to decide upon a strategy to respond to RARE II recommendations. That strategy provided that each State's congressional delegation seek a consensus on wilderness designations within its own State and then introduce separate legislation (Le Master 1984). In the meantime, wilderness interests in the Northwest reacted angrily to the RARE II allocations, which they saw as singularly one-sided in allocating nearly 80 percent of all roadless areas to nonwilderness. In Oregon, 125 wilderness leaders convened for a full day to develop a strategy to address their issue in Congress (Roth 1984). In California, where the final EIS allocated 44 percent of the roadless areas to further study and 16 percent to wilderness, consistent with Californians' preference for a more gradual approach to wilderness designations, environmentalists and the State Department of Natural Resources were still dissatisfied. The State of California filed suit in the District Court of the United States for Eastern California in 1979. In January 1980, the district court ruled in favor of the State's finding that failure to address site-specific impacts, an inadequate range of alternatives, and insufficient opportunity for public comment were major RARE II EIS deficiencies. The ruling enjoined all development on California's 47 roadless areas prior to completion of a

site-specific EIS for each area. The Government appealed the decision, but the Ninth Circuit Court sustained the ruling in 1982 and extended it to Oregon, Washington, Alaska, Idaho, Montana, Nevada, Arizona, and Hawaii. This ruling essentially foreclosed the RARE II goal of releasing national forest lands not allocated to wilderness for non-wilderness uses and management (Karr 1983). It put national forest managers back in the same position that the earlier Conte Decision on RARE I had created — national forest managers had to do site-specific EIS's on roadless areas before releasing them to nonwilderness uses. RARE II, however, did provide a useful and comprehensive basis for State-by-State wilderness consideration, which probably would not have occurred in its absence.

Despite the findings in the California suit and the potential for the district court's ruling to slow down national forest planning and roadless area management, 50 RARE II wilderness bills were introduced in the 96th Congress by the end of 1980. More than half were proposals for designating wilderness for all or selected parts of 15 States. Nine were enacted into law, designating 4.5 million acres of wilderness in Idaho, Montana, Colorado, New Mexico, South Dakota, Missouri, Louisiana, and South Carolina, and 5.4 million acres in Alaska. These actions increased designated national forest wilderness from 15.3 million acres in 1978 and 1979 to 25.1 million in 1980.

To overcome the district court ruling that precluded the release of RARE II EIS roadless areas for non-wilderness uses, Congress wrote language into the wilderness designation legislation for Alaska, Colorado, and New Mexico that determined that their final EIS's had provided "sufficient" evaluation of the RARE II areas. This approach precluded further appeal of the RARE II EIS and permitted the release of nondesignated roadless areas for timber and other resource management. During the 1980's, this became the general State-by-State approach of Congress to additional wilderness designations and release of other areas for nonwilderness uses.

Multiple-Use Planning Procedures Improved

In the early 1970's, the regional multiple-use guides and district multiple-use management plans continued to be the basic mode and tools for allocating uses and managing resources on national forest lands. These plans focused on coordinating various uses by selecting management practices that would avoid or resolve conflicts, but they rarely addressed the question of the combination that would best meet American people's needs as called for in the MUSY Act (Wilson 1978). Another weakness was the implication that all or many uses could be carried out on every acre. Such situations rarely occurred in actual plans, but national forest managers' public information focused so heavily on coordination that they tended to leave this type of understanding with some people. The quality and thoroughness of this initial multiple-use planning effort varied widely within the National Forest System (Wilson 1978). On the Bitterroot, the Monongahela, and the four Wyoming national forests where clearcutting had become a national issue and the subject of intensive Forest Service evaluations, inadequate multiple-use plans or the lack of such plans were identified as important contributors. The Monongahela had not yet developed a plan in 1969 (Weitzman 1977). The Bitterroot Task Force evaluation found that the Bitterroot's multiple-use planning was not far enough advanced and that the plan contained too few coordinating directions (USDA Forest Service 1970). The Wyoming Forest Study Team (USDA Forest Service 1971a) reported similarly, "none of the Forests has attained the required level of planning refinement." Thus, major shortfalls were identified in three regions and on seven forests.

In 1973, the Forest Service undertook a new round of land-use planning that would replace the multiple-use plans with local unit plans, provide closer integration between national objectives and local land use priorities, and seek to fit multiple-use planning closely with NEPA requirements. This action responded to the continuing external criticism over multiple-use planning on national forests, a growing internal dissatisfaction with ranger district multiple-use plans, and the need for wilderness planning to

conform to NEPA requirements consistent with the 1972 Conte Decision. In 1973, the linkage between multiple-use land management planning, wilderness planning, and NEPA planning requirements spurred national forest managers to develop vastly more complete resource inventories and to assign soil scientists, wildlife biologists, hydrologists, and other specialists to collect and analyze basic resource information (Wilkinson and Anderson 1985).

This new generation of land management planning included a hierarchy of direction. The Chief promulgated Service-wide policy and objectives. The Washington Office drafted a national guide for developing regional and local unit plans and alternatives for long-term national forest funding — the Environmental Program for the Future (EPF). The EPF compared national forest uses and management levels and mixes that could be attained under low, moderate, and high funding over a 10-year period. However, these resource use and management levels and mixes were not linked in any specific way to the national forest land base. The Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) and the 1975 RPA program, which was largely built upon its planning concepts, superseded the EPF before it could be finalized.

Regional Planning Area Guides and Unit Plans for Multiple-Use Management

Regional foresters were directed to prepare regional planning area guides that discussed the resource management situation for relatively homogeneous subareas within their regions and provided regional coordinating guidelines and direction for preparing local land unit management plans within those subareas. These guides reflected public participation and input. They usually included estimates of resource use that each planning unit would be expected to provide — an attempt to identify the "mix of uses" appropriate for the resources of the planning area, a major shortcoming in the predecessor multiple-use plans and regional guides.

Unit Plans

National forest supervisors' staffs, working with district people, prepared the unit plans. The authority to approve unit plans was originally delegated to the forest supervisor, but it eventually shifted to the regional forester. Unit plans covered a large drainage or several drainages, and their size varied from 50,000 acres up to several hundred thousand acres. (Wilson 1978). A few national forests opted to consider the whole national forest as the basic unit for multiple-use management planning, and in this way anticipated the NFMA requirement for all forests do so.

Unit plans classified lands, somewhat analogous to zone classification in the multiple-use plans, for combinations of multiple uses according to their suitability to provide those uses. Unit plans also stratified the land base to a greater degree than multiple-use plans. The mix of planned and potential uses within individual management areas was also more complex and required more detailed management guidelines. For example, the 1978 unit plan for Oregon's Umpqua National Forest — one of the few forests where the whole forest was the planning unit — involved more than 20 land-use allocations. There were eight watershed management areas, four recreation management areas, and two wildlife management areas. Most of the Umpqua's lands, however, were allocated to general forest management, which emphasized timber production and included guidelines for coordinating timber management with the needs of sensitive riparian areas and specific wildlife habitats such as winter cover and other resource uses. Four streamside management zones were differentiated by stream size. The management guidance for one such zone required a 33-foot buffer strip on each stream bank with no programmed timber harvest and an additional 99-foot buffer strip where timber would be managed on a 200-year rotation (Wilkinson and Anderson 1985).

The Umpqua plan also included a soil resource inventory that identified and mapped about 250 soil types, which were grouped into resource analysis units based on site productivity, erosion potential, and reforestation capacity. Lands with high soil erosion risks that could damage fish habitats and other resources were identified as critical soil management areas. Resource specialists often examined soil characteristics and wildlife habitats intensively in establishing the unit planning management areas and guidelines. Interdisciplinary teams that prepared unit plans were typically staffed by foresters, wildlife

biologists, recreation planners, landscape architects, and transportation system planners. Economists and sociologists were only sometimes used (Wilkinson and Anderson 1985; Wilson 1978). Because unit plans included the preparation and public review of NEPA-required EIS's, they often included plan alternatives in draft plans prepared for public comment and for the regional forester's decision (Wilson 1978).

"Functional" Resource Plans Link to Unit Plans

Although unit plans did not replace "functional" resource plans, their improved quality and detail provided better information for coordinating and managing multiple uses, including more effective environmental protection. After 1973, when wilderness planning was integrated with unit planning and NEPA requirements, the unit plan process slowed greatly, but the quality of wilderness planning improved significantly (Wilson 1978).

The unit planning process and the plan outputs were a substantial improvement over their predecessor multiple-use plans, but they had their own shortcomings. There was still wide variation in the way unit planning was applied among the national forest regions and among forests within regions. National requirements were not well detailed or rigorous. The Forest Service's decentralized management system allowed for a wide range of interpretation of such direction at the regional level, as well as wide latitude for innovation at the forest level. A variety of approaches emerged and provided opportunities for the more effective planning methods to be more widely adopted, in time, within the National Forest System. However, this strength was also a shortcoming that caused confusion among national public-interest groups who could not identify any standards for comparing the effectiveness of unit plans among forests and regions. The lack of consistency in both form and substance was seen as one of unit planning's weakest features (Wilson 1978). Another weakness was the absence of the goals and objectives of a larger forest, regional, or national planning framework to which unit planning could be related.

Influence of RPA Legislation

The 1974 RPA legislation required, for the first time, that national program planning be linked directly with on-the-ground multiple-use planning at the forest and ranger district levels. Although the legislation did not detail how to achieve this linkage, it required national forests to use a systematic interdisciplinary approach to integrate physical, biological, economic, and other basic resource considerations and a detailed continuous inventory of national forest lands and resources to reflect changes in resource conditions, uses, and values. Because of the short time between the 1974 RPA enactment and the 1975 due date for the first RPA program, the first RPA program documents, submitted to Congress in December 1975, had very little linkage with or input from the national forests and ranger districts. The first RPA program was largely prepared in the Washington Office to respond to the 1975 RPA assessment projections for resource demands using the information developed for the draft EPF.

A primary objective for many people who had supported the RPA legislation had been to improve the Forest Service's ability to obtain appropriations over the long term to meet and balance national forest resource management goals and objectives. Senator Humphrey hoped that putting resource goals into a congressionally adopted "statement of policy" would lead to a stronger commitment for higher and more balanced appropriations. However, for the balance of the 1970's, budget proposals and appropriations fell behind the 1975 RPA programmed targets. Appropriations in 1980, measured in constant dollars, were about the same level as they were in 1971 and about 10 percent more than they were in 1976, which was actually below the 1971 level. Nevertheless, the increase in Forest Service budget authority in current dollars from 1976 to 1981 was 94 percent compared to 59 percent for the whole Federal Government. This indicates that the RPA may have helped the Forest Service achieve relatively more favorable budgets during a period of constrained Federal appropriations. Although comparison of national forest appropriations for six different resource objectives for the 5 years before and after the 1975 RPA showed small changes in the balance of appropriations, both negative and positive, there was little evidence that the 1975 RPA provided

any improvement in the balance of funding in the management of renewable resources (Le Master 1984; Wilkinson and Anderson 1985). Nevertheless, the RPA process made it possible for the Forest Service to have a broader and more open dialogue with congressional appropriations committees and public-interest groups than had previously been possible. In the past, OMB constraints on program and budget testimony had generally inhibited open dialogue between agencies and appropriations committees (McGuire 1996).

Influence of the National Forest Management Act of 1976

NFMA and its regulations went far beyond RPA direction to prepare local land and resource management plans that were linked to national goals and objectives. They spelled out the standards and guidelines for managing multiple uses on national forests. As required by NFMA, the Secretary of Agriculture appointed the Committee of Scientists to give technical and scientific advice and ensure that NFMA implementing regulations would include an effective interdisciplinary planning approach, and they began to help design the NFMA guidelines in May 1977. The Committee advised the Forest Service on the specific wording and merits of alternative implementing standards and guidelines. The Forest Service reviewed the draft NFMA regulations in 18 public meetings to ensure that they were scientifically and technically adequate. The *Federal Register* published a first draft for public comment and the Secretary of Agriculture held two public hearings. In September 1979, final regulations, promulgated by the Forest Service, were issued. They became effective in November 1979 — more than 3 years after the passage of NFMA (Le Master 1984).

The Committee of Scientists helped determined the technical quality of NFMA's guidelines. They ensured greater specificity and rigor than the Forest Service would have provided without their guidance and advice. They added an important dimension of public credibility to regulations that would otherwise not have existed. They strongly endorsed the land and resource planning rationale — derived in large part from the unit planning process — that the Forest Service advanced as a starting point (Hartgraves 1994).

Planning guidelines and procedures for public participation, coordination with other public agencies, and an interdisciplinary approach to NFMA planning were included in the regulations. The planning process itself had the following interrelated steps for producing national forest land and resource management plans: define issues, concerns, and opportunities; identify planning criteria, including indicators of response to issues; collect data and develop information; analyze the current management situation and a baseline for the use of each resource, i.e., the capability of planning areas and their resources to supply the public's demands; specify alternative resource goals and objectives and related management guidelines; determine the effects of the alternatives and evaluate the costs, benefits, and environmental impacts; select a preferred alternative and implement it; and monitor and evaluate management and implementation.

Another component of the NFMA regulations set standards and guidelines for vegetation management, timber harvesting and scheduling, riparian habitat protection, soil and water conservation, and maintenance of plant and animal species diversity. These standards and guidelines included specific minimum management requirements for timber harvesting and other activities. The regulations also described the content and role of "regional plans" to linking national objectives with local level planning — a matter for which neither the RPA nor the NFMA provided guidance. The process, thus, became iterative. The national RPA program allocated national resource output objectives to the nine Forest Service regions. The regions, in turn, allocated their shares to the national forests. Each forest plan included at least one alternative that reflected the forest's share of RPA outputs. However, the allocated objectives were not binding on each final local forest plan. The regulations provided that forests would negotiate and adjust outputs within regions in the event some forests could not meet their allocations. RPA outputs could be reallocated among regions and ultimately used to update the national output objectives in the next RPA program update (LeMaster 1984; Wilkinson and Anderson 1985).

For each of the plan alternatives, national forests were to design land use and resource management objectives to individual management areas over the entire forest. One of the interdisciplinary team's functions was to help ensure that such objectives were fully integrated with each other and the management area resource capabilities. NFMA planning retained the classification and designation of forest zones with similar resource conditions for this purpose but renamed them "management areas" (Hartgraves 1994).

NFMA directed that existing unit plans remain the operational national forest management direction until the new plans were completed. Under NFMA, however, the entire national forest became the basic planning unit. This was done to eliminate a perceived bias that unit planning gave preference to developing plans and management for areas with less difficult management situations — a bias that deferred and concentrated planning and management of more challenging and complex areas to future resource managers. This was not considered a prudent approach to national forest planning and management (Hartgraves 1994).

Although national forest planning had tended to move in the direction of the NFMA guidelines, very few NFMA forest plans (less than 10) were completed and filed with the Environmental Protection Agency before 1985.

NFMA and its regulations established legal direction for developing and implementing national forest plans. NFMA standards and guidelines became a legal basis for evaluating national forest planning and management and the legal basis for national forest plan appeals and court suits, which were to number in the thousands in the 1980's (LeMaster 1984; Wilkinson and Anderson 1985). The national forest plans, in turn, became legal documents used to develop each forest's annual program and budget proposals, but congressional appropriations determined the extent to which the plans could be implemented each year.

The Emergence and Development of Public Participation

From the beginning, the National Forest System's focus on managing a variety of forest land uses required its managers to work with local users, their communities, and interest groups in planning and carrying out national forest management activities. Because of the important role national forests played in the life and work of local communities and their residents, many national forest managers were often recognized as local community leaders (Kaufman 1960; 1967).

Not infrequently, however, national forest managers also had to respond to conflicts with local users and citizen interest groups about national forest resource use and management. Such conflicts usually arose when decisions, based on Forest Service regulations, failed to serve some local interests or preferences. Some issues could be resolved through permits or contracts and their written standards and conditions of use. Often such issues provided opportunities to communicate and develop a fuller understanding among users and citizens about the merits of such decisions — an opportunity which frequently helped management actions become mutually acceptable to both parties. Some management decisions and actions were appealed to higher Forest Service levels, and a few were pursued through court suits (Kaufman 1960; 1967). Appeals and court suits remained relatively limited until the 1970's.

The largely comfortable working relationship between local citizens and interests and national forest decisionmakers changed after World War II. Rapid growth in population, geographic shifts in population distribution, better educated users, and accelerated economic growth gradually brought demographic changes to forest-based communities and States. Increases in mobility, leisure time, and personal income contributed to Americans' growing interest in outdoor recreation, wildlife, wilderness, and associated activities. These trends expanded public interests in national forest use and management and in time became increasingly diversified. At the same time, national forest commodity production grew rapidly in response to national goals and market demands for housing and lumber, minerals, and beef, and contributed strongly to local commu-

nity development. Increasing confrontation and conflicts between the new public interests and activities and expanding commodity production raised public concerns and brought increasing criticism of national forest management. By the late 1960's, the need to involve the public more effectively, to introduce the new planning and decisionmaking procedures, and to obtain better balanced funding among all the multiple uses was becoming increasingly evident to many national forest managers (USDA Forest Service 1977; Cliff 1970).

Although NEPA did not explicitly address the national forests, its policy direction applied where national forest planning and decisions affected the environment. NEPA required Federal agencies to undertake specific efforts to involve the public in their planning and decisionmaking processes. It called for documenting the information and analysis underlying each alternative considered and for public review and comment on the alternatives considered. The Forest Service responded to NEPA's public participation requirements and in January 1970, the Chief of the Forest Service issued *A Guide to Public Involvement in Decisionmaking.* In his transmittal he wrote:

> The surge of public interest in the quality of the environment in the last few years has made conservation a national issue — one in which a great many people are now deeply concerned and want to become involved.... This new public concern provides us the opportunity to more fully inform an attentive public of the principles of conservation which have long been the basis for Forest Service management. And there is no doubt that increased public interest and involvement will also provide us with the opportunity to reach better land management decisions, both in terms of protecting and enhancing the quality of the environment, and in terms of meeting public needs for goods and services. It provides us with a unique opportunity to gain greater public recognition and understanding of these principles and ... the need for a balanced program in all aspects of forestry and forest land management.
>
> The Forest Service is committed to seeking greater public involvement in its decisionmaking process; indeed, we welcome it. (Cliff 1970)

In May 1971, the Forest Service established the agency-wide Inform and Involve Program to bolster its efforts at all Forest Service levels to inform the public and obtain their input on resource management decisions affecting the environment (USDA Forest Service 1972). As the Forest Service developed its public involvement methods during the 1970's, it also helped many other Federal and State agencies in their efforts to do so.

NEPA clearly shifted the emphasis on public participation and expanded its content and training. By 1977, the Inform and Involve Program had provided public involvement training to more than 1,500 Forest Service employees (USDA Forest Service 1977). In 1976, NFMA made public participation in national forest planning and management decisions explicit public policy. In 1977, the Forest Service published a draft *Inform and Involve Handbook* documenting public involvement methods and processes for a wide variety of situations. This handbook became the basic instructional aid for training national forest managers and staff in public involvement and a reference document for field managers.

The handbook described different methods for informing the public about Forest Service plans and actions and involving the public in planning and decisionmaking. It focused on sharing information with the public, collecting information from the public, and describing procedures for documenting, analyzing, and interpreting that input. Most of the public participation methods described in the handbook related to one-way communication of information to the public or one-way collection of information from the public. The handbook described the weak and strong points of these methods and their appropriateness for different objectives and activities. The handbook also described several interactive two-way communication methods. These were seen as viable public participation methods, but also as expensive, time-consuming, and difficult to manage — usually requiring neutral outside facilitators. Information resulting from these interactive methods was thought to more or less limit a manager's discretion because it tended to open the traditionally exclusive forest management decision process to the public. Generally, the handbook tended to protect the national forest manager's exclusive decision authority delegated by the Organic Act of 1897. Thus, public participation in the 1970's became a

process for fuller and wider sharing of information about national forest decisions and activities with the public interested in national forest management. Yet few decisions were changed as a result of this input, which made almost every special-interest group and some individuals disappointed, frustrated, and even angry. Environmentalists, seeing that decisions were basically not changed, began to rely on the court system to satisfy their grievances.

This dominant public involvement approach, did not preclude experimenting with other ways to provide a deeper public sharing in the decisionmaking process. For example, during the mid-1970's, when unit plans were the basic national forest management tool, several foresters on southern national forests introduced a "Charette" approach to obtain more effective public input for their unit plans. They were dissatisfied with the quality of the input that emerged from public meetings, where participants largely recited their positions on the use and management of national forest land planning units. They asked the question: "How can we get people to understand what they really want on a piece of land?" (Sweetland 1992). The "Charette" was a process for integrating and managing ideas and preferences from a group of people with different interests but an agreed upon common goal — to produce an integrated fitting of their varied interests into a workable design or plan. The participants were organized into workgroups. National forest staff and managers served as facilitators and consultants on legal, administrative, and technical limitations and bounds. They did not direct the workshop or influence its outcomes. The national forest role was only informational and procedural.

This process was initially developed and successfully implemented for unit planning on the national forests of Texas and then other national forests in the Southern Region. It worked well when the task and product were well-defined and there were well-defined differences among the represented interests, but it also required a common commitment to produce an integrated single design for national forest planning units. It was not an effective approach where one or more participants insisted and pressed adamantly for their particular preferences.

The South's Charette approach was an important step toward opening the Forest Service to wider use of consensus building and negotiating approaches to public participation in the 1980's. Although the Charette approach was documented and often presented and discussed elsewhere in the Forest Service, it did not have strong support from the Washington Office. There was a strong feeling that a consensus or negotiation approach to national forest decisions involved "giving some authority away," which was perceived by some national forest managers as a planning and decisionmaking weakness (Sweetland 1992).

Lessons from the National Issues of the 1970's

In the 1970's, the organization and administration of the National Forest System was still strongly hierarchical. The roles of the Washington Office, regional offices, forest supervisors' offices, and ranger district offices were clearly differentiated. National forest planning and management decisionmaking, however, was highly decentralized because national centralized planning and decisionmaking for 155 widely dispersed national forests (146 administrative units) and more than 700 ranger districts involving a wide range of forest and rangeland conditions and user interests was not a feasible option. *Management decisions needed to respond to local uses and users and be sensitive to local resource conditions.*

The philosophy of managing multiple uses called for equal consideration of all resources and the combination of uses that provided the greatest benefit to the American people. But *specific guidelines and standards for integrating the management of uses were very weak or lacking at all levels.* They were strengthened by the introduction of unit planning in 1973 and further improved by the passage of NFMA in 1976 and its regulations in 1979. In the 1970's, there were no reporting or evaluation systems for monitoring, assessing, and overseeing multiple-use management performance at any level of the Forest Service. Local resource managers had great flexibility, but also the burden of responsibility for managing multiple uses (fitting them according to the capabilities of ecosystems and compatibly with

existing uses where they overlapped or adjoined). The general National Forest System philosophy was to resolve national forest management issues (as opposed to policy issues) and problems at the lowest practical level.

Resource programs, budgets, operating divisions, Forest Service manuals and handbooks, and reporting systems were all organized by function. Planning by function had been an important component of national forest operations and was historically well established. The better-funded functional programs, such as forest engineering (mainly the construction of roads) and timber management, often helped projects in other, less well-funded resource areas that could be carried out as joint operations with road construction and maintenance or timber management. This was one aspect of multiple-use management. *Coordination by "functional" specialists was the principal tool for integrating multiple uses and their management on the ground.*

The Washington Office was responsible for developing national-level programs, budgets, and policy and for public affairs, while implementing programs and budgets and the management of national forests was the primary and separate role of the regional, national forest, and ranger district managers. The Washington Office dealt with policy; the local field units with the solution to on-the-ground problems. Decentralized decisionmaking became the guiding principle for solving land management problems. Under this principle, *problems were analyzed using local technical and management considerations and did not explicitly delve into policy questions. This worked well as long as problems remained individual local problems and were not widely replicated among the 9 national forest regions and the 155 national forests.*

When the Washington Office finally undertook a national assessment of clearcutting in 1970 and found 30 types of problem situations associated with it, it was too late to manage the clearcutting issue internally and at a local level. The *Forest Service's decentralized management and sharp hierarchical division of responsibilities without central oversight or evaluation seems to have contributed to the public's increasing dissatisfaction with clearcutting* and related timber management practices in the 1960's and their emergence as a national issue in the 1970's. *The monolithic loyalty and inflexible commitment of national forest managers to the agency's organizational philosophy and discipline as well as its resource mission and program likewise probably contributed importantly to its inability to respond more effectively and quickly to the public's changing values and the issues they raised* (Kaufman 1994).

Other aspects of National Forest System operations may have contributed to the clearcutting issue. National forest management was driven incrementally, year by year, by the continuing and growing public demands for all national forest uses. *There was little or no clear information about how these continuing and growing uses and their management would shape and condition the national forests for the future. Nor could anyone explain how the multiple-use management approach worked to find the level and mix of uses that would best meet the American people's needs.* The fact that public preferences and "needs" were evolving rapidly and unpredictably during this period at both the national and local level contributed significantly to this problem. Thus, the *management of the National Forest System depends on the public's trust of its professional resource managers. The emergence of clearcutting as a national issue undermined a great deal of that trust* — and as a result, substantial responsibility for providing planning and management guidelines and standards and for the public's participation in establishing goals and direction for such planning, managing, and monitoring shifted to Congress.

The *lack of a comprehensive system for evaluating the performance of multiple-use management probably contributed similarly, but indirectly, to the decline of public trust and the tarnishing of the Forest Service's image.* While there was some misuse of clearcutting, there were many successes in fitting multiple uses into National Forest System ecosystems; but they were just not as widely publicized as the problems. Generally, national forests conducted their timber management activities in ways that protected watersheds; permitted the expansion of wilderness designation; encouraged the growth of recreation, wildlife, and fishery uses; and maintained

or improved rangelands. *But there was a lack of national and regional measures for assessing and documenting the performance and success of multiple-use management on the ground.* Management conflicts and problems were surfaced and publicized locally and nationally through complaints and actions of individuals, interest groups, and the media. But there were no measures or assessments of *the successes of multiple-use management; they were poorly documented and not effectively communicated to the local and national public.*

Wilderness designation, for example, was initiated in the 1920's and steadily expanded through the 1960's and 1970's. Recreation use on national forests, including hunting, fishing, and wildlife observation, grew much more rapidly than the U.S. population, and national forest management accommodated it well during the 1960's and most of the 1970's. Watersheds generally were successful in ameliorating waterflows and maintaining stable soil conditions. Serious damage or major disasters were rare. Domestic livestock numbers on national forest rangelands were reduced, and rangeland conditions were generally maintained or improved. Timber harvesting and management, after rapid acceleration following World War II, remained relatively stable in the 1960's and declined slightly in the 1970's.

Timber use tended to shape national forest management in the sense that it was usually the first use involving management of undeveloped forest areas. Planned harvests were dispersed throughout the National Forest System for three reasons: to provide access for other uses, to provide more effective resource protection and administration, and to leave forest conditions in roaded, but unharvested, areas that were suitable for other uses. The 1969 Douglas-fir supply study, for example, reported that recreation users, including hunters and anglers, promptly took advantage of new roads in previously undeveloped areas.

The University of Montana's report on its evaluation of clearcutting on Montana's Bitterroot looked at the Forest Service's multiple-use philosophy and found it wanting. The Senate Subcommittee's hearing report, however, did not find any general issue with the way the Bitterroot's had implemented the multiple-use philosophy. It focused only on clearcutting being misused as it related to other resources uses and sensitivities. NFMA addressed the same issue. It strongly affirmed the multiple-use approach to national forest management, provided legislative guidelines and standards to implement it, and monitoring requirements to evaluate its performance. Thus, *the management of multiple uses in the combination that would best meet the needs of the American people remained the basic policy for national forest management policy. But the public perceived a need for more consistency in national forest management.* This need called for more sufficient guidelines and standards that would ensure *"equal consideration" for all national forest uses and resources and stronger integration of the sciences and professional disciplines in managing and protecting those resources. It also called for a clear explanation and public understanding of how the management of multiple uses contributed to the "greatest good of the American people."*

Even though national forest managers successfully accommodated the rapid growth in recreation, wildlife, and fishery use, some users were not happy with the rapid development of the national forests primarily for timber production in the 1950's and 1960's. As timber harvesting was extended into the remaining unaccessed old-growth timber, year after year, road access and timber harvesting were seen as rapidly reducing the *de facto* wilderness and the decreasing opportunities for designating many areas desirable for wilderness. The issue was aggravated when national forest managers reallocated some forested areas previously set aside as primitive and wilderness candidate areas for designation to timber management. As a result, the Wilderness Act of 1964 withdrew forest managers' authority to define and designate wilderness and placed it with Congress.

Complaints about clearcutting emerged from other national forest users in the early 1960's. These complaints grew and became more widespread during the balance of the decade and the early 1970's. National forest evaluation teams repeatedly reported *a need to involve interested national forest users earlier and more effectively in planning timber harvests that involved clearcutting,* especially where

there were sensitive soils and others were using the national forests for nontimber purposes.

Users who were concerned with clearcutting and its apparent unacceptable impacts often reported that *national forest managers were less than responsive to their concerns.* These reported shortfalls — where clearcutting and related timber management were inappropriately applied — called for a *more integrated approach to managing multiple uses at the grassroots level and less functional management. They also indicated the need for some effective public participation and a better two-way dialog between national forest resource managers and all interested public.*

NFMA ultimately provided legislative guidelines and standards for planning, managing, and monitoring multiple uses. *The public, interest groups, and the national forest managers can use monitoring results to evaluate the effectiveness of management for multiple uses and sustaining resources.*

Notwithstanding the internal weaknesses in the National Forest System, other factors contributed to those shortfalls. During the 1950's, 1960's, and 1970's, the national priority for meeting post-World War II housing goals in the face of rapid population and economic growth and the need to brake and reverse runaway inflation were powerful driving forces for increasing national forest timber harvests. For several decades, there was a lack of a clear national consensus on allocation of multiple uses, including wilderness use, on national forests.

Finally, there have been some important benefits to the accelerated national forest timber harvest that have not been well presented to the public. After World War II, such harvests tended to stabilize the timber industry and many rural and urban communities in the Pacific Northwest. Nationally, the increased national forest harvests reduced the pressure to harvest sawtimber on the South's heavily cutover and young, mostly private forests for about two decades, giving them time to grow and mature.

Public and interest group demands for more balanced use of national forests and management adjustments for environmental quality purposes continued to escalate throughout the 1970's, even though forest managers' efforts to respond to growing user demands and public issues intensified and increased. As national forest plans began to be completed in the early 1980's, appeals related to the plans accelerated and the number of court suits grew. Chapter 5 addresses on-the-ground management responses of national forest managers to the growing pressures of the 1970's.

References

American Enterprise Institute. 1974. *Forest Management and Timber Supply Legislation.* Legislative Analysis No. 17. Washington, DC. 39 pp.

American Forests. 1973. "Funding is the Name of the Game." Vol. 79:12, December 1973.

Bolle, Arnold W. 1989. "The Bitterroot Revisited: A University Re-View of the Forest Service." In: *The Public Land Law Review* 10:1-17. University of Oregon, Eugene.

Clary, David A. 1986. *Timber and the Forest Service.* University Press of Kansas, Lawrence, KS. 251 pp.

Cliff, Edward P. 1970. *The Forest Service in the Seventies.* Interoffice memorandum circulated to Forest Service employees, October 1970. USDA Forest Service, Washington, DC. 86 pp.

Cliff, Edward P. 1971. Letter dated April 2, 1971, to Hon. Gale McGee, U.S. Senator, transmitting report *National Forest Management in a Quality Environment: Timber Productivity.* USDA Forest Service, Washington DC.

Cravens, Jay H. 1970. Letter dated August 6, 1970, from Regional Forester to National Forest Supervisors in the Eastern Region advising them on enhancement concepts of ecology for national forest management. USDA Forest Service, Milwaukee, WI.

Cubbage, Frederick W., Jay O'Laughlin, and C.S. Bullock. 1993. *Forest Resource Policy.* John Wiley and Sons, Inc. New York, NY. 562 pp.

Fisher, Joseph L. 1974. "A Search for Consensus." In: *Forest Policy for the Future: Papers and Decisions from a Forum on Forest Policy in the Future.* Resources for the Future, Inc., Washington, DC. pp. 315-326.

Hartgraves, Rex. 1994. Direct discussions in April 1994. Rex Hartgraves was former Forest Supervisor of the Beaverhead National Forest and the former Director of Land and Resource Management Planning under NFMA in the Washington Office. USDA Forest Service, Washington, DC.

Hines, Judith L. 1987. *Log Export Restrictions of the Western States and British Columbia.* Gen. Tech. Report PNW-GTR-208. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. 13 pp.

Hirt, Paul W. 1994. *A Conspiracy of Optimism — Management of National Forests Since World War II.* University of Nebraska Press, Lincoln, NB. 416 pp.

Humphrey, Hubert H. 1974. *Congressional Record,* 93rd Congress, 1st Session, October 2, 1974.

Karr, Ray. 1983. *Forests for the People: Case Study of the RARE II Decision.* Ph.D. Dissertation. School of Forestry, University of Montana, Missoula, MT. 248 pp.

Kaufman, Herbert. 1960; 1967. *The Forest Ranger: A Study of Administrative Behavior.* The Johns Hopkins University Press, Baltimore, MD. 259 pp.

Kaufman, Herbert. 1994. *The Paradox of Excellence.* A talk given at Grey Towers, Milford, PA, in June 1994. 8 pp.

Le Master, Dennis C. 1984. *Decade of Change — The Remaking of Forest Service Statutory Authority during the 1970's.* Greenwood Press, Westport, CT. 290 pp.

McGuire, John. 1996. Direct communication with former Chief of the Forest Service. January 1996. Washington, DC.

Nelson, M.M. 1970. Letter from the Deputy Chief for the National Forest System to Regional Foresters on ecosystem reading and training. June 9, 1970. USDA Forest Service, Washington, DC.

Nixon, Richard M. 1970. Statement of the President on the Report of the Task Force of the Cabinet Committee on Economic Policy. *Weekly Compilation of Presidential Documents.* June 22, 1970. Executive Office of the President, Washington DC.

Pinchot, Gifford. 1907. *The Use of the National Forests.* U.S. Government Printing Office. Washington, DC.

Popovich, Luke. 1975. "The Bitterroot: Remembrances of Things Past." *Journal of Forestry* 73:12:741-793 and 74:1:39-41.

Resources for the Future. 1974. *Forum on Forest Policy for the Future: Conflict, Compromise, Consensus.* Held at the Cosmos Club, Washington, DC., May 8 and 9, 1974.

Roth, Dennis M. 1984. *The Wilderness Movement and the National Forests: 1964-1980.* FS-391. USDA Forest Service, Washington DC. 70 p.

Science. 1973. "Timber Study Reinforces the Nixon Policy." Volume 182, No. 4108, October 12,1973. p. 144

Sweetland, Paul C. 1978. *An Analysis and Critique of the Events leading to the Enactment of the National Forest Management Act of 1976.* Master's Thesis. Colorado State University, Fort Collins, CO. 89 p.

Sweetland, Paul C. 1992. Transcript of Oral History Interview by Terry West, Senior Historian, USDA Forest Service. February 20 and March 13, 1992. Washington DC.

Towell, W.E. 1973. "What's New at AFA?" *American Forests,* Vol. 79:11. November 1973.

Ulrich, Alice H. 1990. *U.S. Timber Production, Trade, Consumption, and Price Statistics 1960–80.* Misc. Pub. No. 1486. USDA Forest Service, Washington, DC. 80 pp.

U.S. Senate. 1968. Hearings on Proposed Housing Legislation for 1968 before the Subcommittee on Housing and Urban Development of the Committee on Banking and Currency. 90th Congress, 2nd Session. Washington, DC.

U.S. Senate. 1969. "Problems in Lumber Pricing and Production." Hearing before the Subcommittee on Housing and Urban Affairs of the Committee on Banking and Currency. 91st Congress, 2nd Session. Washington, DC.

U.S. Senate. 1970. Committee on Interior and Insular Affairs. "A University View of the Forest Service." Report of the Select Committee of the University of Montana on the Bitterroot National Forest. Senate Document 91-115. 91st Congress, 2nd Session. Washington, DC

U.S. Senate 1971. "Management Practices on Public Lands," Parts 1-3. Hearings before the Subcommittee on Public Lands of the Committee on Interior and Insular Affairs. 92nd Congress, 1st session. Washington, DC.

U.S. Senate. 1972. *Clearcutting on Federal Timber Lands.* Report of the Subcommittee on Public Lands of the Committee on Interior and Insular Affairs. 92nd Congress, 2nd session. Washington, DC.

USDA. 1968. *Timber Demand and Supply Outlook, 1962–1971 with Alternatives for Federal Response.* Special Study (4-6-1). August 1, 1968. Washington DC. Unpublished Report in the author's files.

USDA. 1972. *Facing up to the Timber Supply Problem: A Conference with Secretary of Agriculture Earl L. Butz.* September 7, 1972, B-354 Rayburn House Office Building, Washington, DC. 20 pp.

USDA Forest Service. 1966. *Annual Report to the Chief for Fiscal Year 1965.* Washington DC.

USDA Forest Service. 1969a. Adjusting Timber Appraisals. News Release 2134-69, July 11, 1969. Washington, DC.

USDA Forest Service. 1969b. *Douglas-fir Supply Study.* Regions Five and Six and the Pacific Northwest Forest and Range Experiment Station, Portland, OR. 53 pp.

USDA Forest Service. 1970. *Management Practices on the Bitterroot National Forest.* Joint Northern Region – Intermountain Station Task Force. Washington, DC.

USDA Forest Service. 1971a. *Forest Management in Wyoming: Timber Harvest and the Environment in the Teton, Bridger, Shoshone, and Bighorn National Forests.* Wyoming Forest Study Team. Washington, DC. 86 pp.

USDA Forest Service. 1971b. *National Forest Management in a Quality Environment: Timber Productivity.* Washington, DC. 70 pp.

USDA Forest Service. 1972. *Report of the Chief for Fiscal Years 1970–1971.* Washington DC.

USDA Forest Service. 1974a. *Final Environmental Impact Statement: Selection of Final New Study Areas from Roadless and Undeveloped Areas within the National Forests.* Washington, DC.

USDA Forest Service. 1974b. *Report of the Chief for Fiscal Years 1972 and 1973.* Washington DC.

USDA Forest Service. 1975. *Annual Report on Wilderness Status for Fiscal Year 1974.* Washington DC.

USDA Forest Service. 1977. *Forest Service Inform and Involve Handbook* (Draft). Washington, DC. 310 pp.

Washington *Star-News.* 1973. "Lumbering Ahead" (editorial). October 29, 1983.

Washington Post. 1979. "Wilderness and People." April 18, 1979.

Weitzman, Sidney. 1977. *Lessons from the Monongahela Experience: An In-Service Analysis.* USDA Forest Service, Washington, DC. 62 pp.

Wilkinson, Charles F., and H.M. Anderson. 1985. "Land and Resource Planning in the National Forests." *Oregon Law Review* 64:1 and 2. University of Oregon, Eugene. 373 pp.

Wilson, Carl. 1978. "Land Management Planning Process of the Forest Service." *Environmental Law* 8:461-477.